County Borough of Ipswich.

REPORT

of

THE MEDICAL OFFICER OF HEALTH

and

SCHOOL MEDICAL OFFICER

for the Year 1933.

COUNTY BOROUGH OF IPSWICH.

Annual Report

of the

Medical Officer of Health and School Medical Officer

for 1933

By A. M. N. PRINGLE,
M.B., C.M. Edin., D.P.H. Camb.,
Medical Officer of Health,
School Medical Officer, Superintendent Isolation Hospital,
Medical Officer to the Ipswich Port Sanitary Authority,
Fellow of the Royal Sanitary Institute,
Fellow of the Royal Society of Medicine,
etc.

IPSWICH
EAST ANGLIAN DAILY TIMES CO., LTD.
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County Borough of Ipswich.

PUBLIC HEALTH DEPARTMENT,
ELM STREET,
IPSWICH,

June, 1934.

LADIES AND GENTLEMEN,

I have the honour to present my Report on the Health of Ipswich for the year 1933.

Attention is drawn to the extent of the operations of modern Public Health Authorities and to the part played by them in the daily life of the people.

Public Health Authorities are no longer concerned merely with the environment of the populace, but with the people themselves from before birth to death.

A view of the case so comprehensive as this indicates that finality has not been reached, by any means, and it can be predicted with confidence that advances in knowledge will open up more and more opportunities for the prevention of disease.

At the present moment we are engaged largely in the task of remedying failures of prevention. The Authorities of the future, in those halcyon days, when ignorance and prejudice have been banished from the face of the earth, will supervise communities from which scientific knowledge will have banished all preventible diseases.

No living person will see these days.

I wish to place on record my appreciation of the support given me by the Public Health Committee in all matters pertaining to the health of the people.

I give very special thanks to the members of the staff of the Public Health Department for the services they have rendered to the cause of the Public Health.

I am, Ladies and Gentlemen,

Your obedient Servant,

A. M. N. PRINGLE, M.B., C.M., D.P.H.,
Medical Officer of Health,
School Medical Officer.

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COUNTY BOROUGH OF IPSWICH.

Public Health Officers of the Authority.

December 31st, 1933.

MEDICAL (Whole Time).

Medical Officer of Health, School Medical Officer, Tuberculosis Officer and Superintendent, Ipswich Isolation Hospital
A. M. N. PRINGLE, M.B., C.M. (Edin.), D.P.H. (Camb.)

Deputy Medical Officer of Health, etc., etc.
A. W. GAYE, B.A., M.B., B.Ch., D.P.H. (Camb.), M.B., Ch.B. (Manc.).

Assistant Medical Officer of Health, Resident Medical Officer, Ipswich Isolation Hospital, etc.
DORIS E. P. JOLLY, M.B., B.S., M.R.C.S., L.R.C.P., D.P.H.

Medical Superintendent, Ipswich Sanatorium
W. F. SUTCLIFFE, M.R.C.S., L.R.C.P.

Assistant Medical Officer, Ipswich Sanatorium
R. PHILPOTT, M.A., M.R.C.S., L.R.C.P.

Resident Medical Officer, Heathfields Municipal Hospital
ANNIE C. EASTERBROOK, M.B., Ch.B. (Edin.), D.P.H. (London)

Part Time.

Assistant School Medical Officer
EDNA M. EDWARDS, M.R.C.S., L.R.C.P.

Medical Officer V.D. Clinic
F. FOWLER WARD, B.A., M.B., B.Ch.

Medical Officer Heathfields Municipal Hospital and St. John's Home
J. GUTCH, M.A., M.D., B.Ch., M.R.C.S., L.R.C.P.

District Medical Officer under Poor Law Acts
W. F. FRYER, L.R.C.P., M.R.C.S.

Public Vaccinator
H. W. FAREBROTHER, M.R.C.S., L.R.C.P. (London)

Consultants.

Orthopaedics
R. CHARLES, O.B.E., F.R.C.S.

Puerperal Fever
J. GUTCH, M.A., M.D., B.Ch., M.R.C.S., L.R.C.P.

DENTAL SURGEONS (Whole Time).

Education and Public Health
T. A. EDMONDSON, L.D.S., R.C.S. (Eng.)
A. W. T. WARD, L.D.S., R.C.S. (Eng.)
R. CUTHILL, L.D.S., R.C.S. (Eng.)

PUBLIC HEALTH OFFICERS OF THE AUTHORITY—continued.

OTHER OFFICERS (Whole Time).

Chief Sanitary Inspector.

H. L. BATY, 1, 2

District Sanitary Inspectors.

G. ELLISON, 1, 2   R. F. WYNN, 1, 2.   F. W. FAIREY, 1, 2.
L. J. MASSAM, 1, 2
(Appointed 1/7/1933).

Health Visitors.

Miss F. PEPPER, 3, 4, 5   Miss M. SPRINGETT, 3, 4, 5
„ F. M. CROSS, 3, 4, 5   Mrs. E. F. FENNA, 3, 4, 5

School Nurses.

Miss M. SANDBACH, 3.   Miss F. ILETT, 3

Tuberculosis Nurse.

Miss E. JONES, 3

Matron, Isolation Hospital.

Miss E. LAW, 3

Midwives, Maternity Home.

Miss E. WILLCOX, 3, 4   Miss G. KENNEY, 3, 4

Chief Clerk.

H. J. WALTON, 1

1.—Sanitary Inspectors Certificate R.S. Institute.
2.—Meat Inspectors Certificate.
3.—Trained Nurse.
4.—Certificate of C.M.B.
5.—Health Visitors Certificate R.S.I.

Part Time.

Public Analyst.

W. LINCOLNE SUTTON, F.I.C.

Veterinary Surgeon.

W. J. BROWNING, M.R.C.V.S.

Vaccination Officers.

Ipswich (Eastern) Sub District, S. JAMES
Ipswich (Western) Sub-District, H. J. WALTON

Matron, Maternity Home.

Miss M. BLYTH, 3, 4

GENERAL PROVISION OF HEALTH SERVICES FOR THE COUNTY BOROUGH OF IPSWICH.

HOSPITAL PROVISION.

1. Fever.

Ipswich Isolation Hospital, Foxhall Road, Ipswich—110 beds, including cubicle block of 24 beds for suspects or mixed infections—accommodation for all forms of Infectious Diseases.

2. Small Pox.

Ipswich Small Pox Hospital, Foxhall Heath, near Ipswich—24 beds.

3. Tuberculosis.

Ipswich Sanatorium, Foxhall, near Ipswich—120 beds, early cases.

Ipswich Isolation Hospital :—

Advanced Tuberculosis—30 beds.

Surgical Tuberculosis—24 beds.

East Suffolk and Ipswich Hospital (Voluntary Hospital)—beds as required for operative treatment.

4. Maternity.

Ipswich Maternity Home, Wingfield Street, Ipswich—15 bedrooms and 2 Labour Rooms.

5. Municipal Hospital.

Heathfields Municipal Hospital—311 beds.

AMBULANCE FACILITIES.

(a) Infectious Cases.

A Motor Ambulance has been provided by the Council and Motor Van for the removal of infected bedding.

(b) Non-Infectious and Accident Cases.

The Council have no Ambulances for use in these connections, but assists the local Branch of St. John Ambulance by an annual grant.

CLINICS AND TREATMENT CENTRES.

1. INFANT WELFARE CENTRES.

(a) Public Health Department, Elm Street.

Every afternoon (except Saturday), 2.30 p.m.—5.0 p.m.
Medical Officer in attendance Monday and Thursday.

(b) Nacton Estate (Red Triangle Hut).

Every Tuesday afternoon, 2.30 p.m.—5 p.m.
Medical Officer in attendance, 2.30 p.m.—3.30 p.m.

2. ANTE-NATAL AND POST-NATAL CLINICS.

Every Wednesday and Friday afternoon, 2.30 p.m.—5 p.m.

3. ARTIFICIAL LIGHT CLINIC.

Every afternoon, except Wednesday and Saturday, at 2.30 p.m.

4. SCHOOL CLINIC.

Open every day for all children attending School.

5. TREATMENT CLINIC.

Open every day for all children attending School.

6. DENTAL CLINIC.

Open every day for all children attending School.

Tuberculosis patients, expectant mothers and children under 5 years by special appointment.

7. TUBERCULOSIS DISPENSARY.

Adults every Tuesday and Friday at 10 a.m.
Children every Friday at 2.30 p.m.

8. TREATMENT CENTRE (VENEREAL DISEASES).

Clinics are held at the East Suffolk and Ipswich Hospital (Voluntary Hospital) as under:—

Adults—Males, Wednesday at 5.30 p.m., Friday at 1 p.m.
Females, Wednesday at 4.0 p.m., Friday at 2.30 p.m.
Children, Thursday at 11 a.m.

All the above Clinics are held at the Public Health Department, Elm Street, Ipswich, except where stated otherwise

STATISTICS AND SOCIAL CONDITIONS.

Area (acres)	8,432
Population, Census 1921	79,371
Population, Census 1931	87,557
No. of Inhabited Houses (1931)	21,923
No. of Inhabited Houses (at 31/3/1933) according to Rate Books	24,194
No. of Families or Separate Occupiers (1931)	22,758
Rateable Value, March, 1933	£514,101
Sum represented by a Penny Rate, 1933...	£1,950

EXTRACTS FROM VITAL STATISTICS OF THE YEAR 1933.

	Total.	M	F.	
				Birth-Rate.
BIRTHS—Legitimate ...	1,206	625	581	14.3
,, Illegitimate ...	68	35	33	
				Rate per 1,000 Total Births.
STILLBIRTHS	51	26	25	38
				Death Rate.
DEATHS	1,019	487	532	11.44

Percentage of Total Deaths occurring in Public Institutions ...		35%
Number of women dying in, or in consequence of, child-birth	From Sepsis ..	2
	From other causes ...	3

Death-rate of Infants under 1 year of age per 1,000 live Births :—
Legitimate 44, Illegitimate 88 ... ... Total 46

Deaths from Measles (all ages)	2
Deaths from Whooping Cough (all ages)	3
Deaths from Diarrhœa (under 2 years of age)	1

THE 1931 CENSUS.

POPULATION.

The following Table shows the changes that have taken place in the numbers of the population of Ipswich since the first Census in 1801 :—

Year.	Census Populations.			Population Increases					Females per 1,000 Males.
	Males.	Females.	Persons.	Total Increases	Per cent. Proportions.	Natural Increases	Migrations. Inward	Migrations. Outward.	
1801	4,984	6,293	11,277	—	—	—	-		1,262
1811	6,064	7,606	13,670	2,393	21.2		—	—	1,254
1821	7,831	9,355	17,186	3,516	25 6				1,194
1831	9,169	11,032	20,201	3,015	17.5				1,203
1841	11,894	13,490	25,384	5,185	25.6	—	—		1,134
1851	15,474	17,440	32,914	7,530	29.6	2,822	4,708		1,127
1861	17,667	20,283	37,950	5,036	15.3	4.075	961	-	1.148
1871	20,047	22,900	42,947	4,997	13.1	4,373	624		1,143
1881	23,608	26,712	50,320	7,373	17.1	5,290	2,083	-	1,131
1891	26,658	30,712	57,360	7,040	13.9	7,033	7		1,151
1901	31,181	35,449	66,630	9,270	16.1	6,610	2,660		1,136
1911	34,980	38,952	73,932	7,302	10.9	8,232	-	930	1,113
1921	37,359	42,012	79,371	5,439	7.4	5,979	—	540	1,124
1931	41,285	46,217	87,502	8,131	10.2	5,616	2,515	-	1,119
1931	41,412	46,358	87,770*		—	—	—		—
1932	41,850	46,850	88,700*		—		-		-
1933	42,025	47,045	89,070*	—	—	-	-	—	-

*Registrar-General's Estimates.

The population, therefore, increased by 8,131 in the decennium 1921-1931, or 10.2%.

For this increase immigration was responsible for 2,515 as compared with losses of 540 and 930 at the two previous enumerations.

Of the immigrants 928 were males and 1,587 females.

The sex distribution of the 1931 population was about the average of the two previous Censuses. It is of interest that the female population of Ipswich has been consistently excessive throughout the whole series of Census Returns, when compared with the experience of England and Wales as a whole. This is shown thus :—

Census Year.	Females per 1,000 Males.	
	England and Wales.	Ipswich.
1801	1,057	1,262
1811	1,054	1,254
1821	1,036	1,194
1831	1,040	1,203
1841	1,046	1,134
1851	1,042	1,127
1861	1,053	1,148
1871	1,054	1,143
1881	1,055	1,131
1891	1,064	1,151
1901	1,068	1,136
1911	1,068	1,113
1921	1,096	1,124
1931	1,087	1,119

HOUSING.

The Housing provision to meet the needs of the population is exhibited in the comparative view of the number of Houses containing dwellings enumerated at each Census since 1901.

COMPARATIVE VIEW OF THE NUMBER OF HOUSES CONTAINING DWELLINGS AT THE CENSUS RETURNS SINCE 1901.

Dwellings	Census Years.			
	1901	1911	1921	1931
Number of Inhabitated Dwellings	14,518	16,682	17,764	21,923
Number of Uninhabitated Dwellings	910	751	487	563
Total Number of Dwellings containing Habitations ...	15,428	17,372	18,251	22,486
Intercensal increase in occupied Dwellings	2,196	2,164	1,127	4,159
Percentage of increase in occupied Dwellings	17.8%	14.9%	6.8%	23.4%
Total Population requiring Housing	66,630	73,932	79,371	87,502
Number of Rooms in occupied Houses			95,821	120,863

From this it appears that the houses containing dwellings increased between 1901 and 1931 by 7,058, or 45.7%, whereas the population o be housed increased by 20,872, or 31.3%. The slump in building between 1911 and 1921 is very conspicuous, and brings into vivid contrast the progress made in house building between 1921 and 1931.

The Census figures show that the number of private families in Ipswich between 1901 and 1931 increased by 8,029, or 54.5%. This is shown in the Table:—

HOUSING OF PRIVATE FAMILIES.

Private Families	Census Years.			
	1901	1911	1921.	1931.
Number of Private Families ...	*14,729	16,997	18,923	22,758
Number of Persons per Family ...	4.52	4.18	4.05	3.68
Total population of Private Families	*64,847	71,043	76,654	83,722
Intercensal increase in the number of Private Families	2,163	2,395	1,926	3,835
Proportional increase in the number of Private Families	17.2%	16.2%	11,03%	20.27%
Number of Persons per room ...		.75	.80	.69
More than 2 Persons per room (Persons)		889	3,134	1,853
Proportion of population living more than 2 in a room ...		1.3%	4.09%	2.21%

*These figures are not strictly comparable with the others in the same group, but are near enough for comparative purposes.

It appears from this that at the Censuses of 1901 and 1911 the number of houses available was greater than the number of private families.

In 1921, on the other hand, the number of private families was a good deal greater than the number of houses, and in 1931 the number of houses was still in arrear of the number of private families requiring housing.

A notable feature of the Census Returns of recent years is the decline in the number of persons per family. In 1931 this reached the lowest point recorded, the figures showing a decline of 19.6% in the number of persons per family since 1901.

The decline in house building before the war and its total cessation during the war was the main cause of overcrowding. This is shown in the figure giving the number of persons per room which increased from .75 to .80 during the worst period and then receded to its present figure of .69.

This fact is amplified in the figures showing more than 2 persons per room, viz., 889 in 1911, 3,134 in 1921, declining to 1,853 in 1931.

The decline in the number of persons per family must not be forgotten in this relation.

NUMBER OF HOUSES, ROOMS AND PRIVATE FAMILIES.

The 1931 Census compared with that of 1921.

Dwellings occupied by private families :—

1921 CENSUS.

No. of Dwellings with	1–3 Rooms.	4–5 Rooms.	6–8 Rooms.	9 + Rooms.	All Sizes.
Occupied by 1 Private Family	1,017	8,455	6,653	605	16,730
,, ,, 2 ,, Families	7	372	515	53	947
,, ,, 3 ,, ,,	1	13	48	25	87
Total Occupied Houses ...	1,025	8,840	7,216	683	17,764
Total Private Families ...	1,034	9,242	7,847	800	18,923
Total Persons	7,146	37,834	26,458	5,226	76,664

1931 CENSUS.

No. of Dwellings with —	1–3 Rooms.	4–5 Rooms.	6–8 Rooms.	9 + Rooms.	All Sizes.
Occupied by 1 Private Family	948	9,197	10,469	609	21,223
,, ,, 2 ,, Families	6	167	396	43	612
,, ,, 3 ,, ,,		5	51	32	88
Total occupied Houses ...	954	9,369	10,916	684	21,923
Total Private Families ...	960	9,549	11,443	806	22,758
Total Persons ...	5,331	35,941	37,175	5,275	83,722

This Table supplements the information already given. It indicates quite clearly that the modern tendency is to provide houses with a reasonable number of rooms in relation to the private family.

The smaller houses are relics of ideas of housing which have long been discredited as suitable for families, but there still exists a definite need for small houses for old people and people without families who are not in a position to afford the rent of the larger houses, who, in fact, require one or two rooms only. For these the new single-roomed dwellings meet a definite need, and more of the type are required.

The Table shows that in 1931 there was an actual diminution in the number of houses with from 1-3 rooms, and a substantial decline in the number of people living in them.

There was a small increase in the number of 4-5 room houses, but a decline in the number of persons living in them, partly owing to a diminution in the number of houses with more than one family, and partly to the lessened size of families.

There was a large increase in the number of houses of the 6-8 room type, which was associated with a corresponding increase in the number of inhabitants. This also was associated with a decline in the number of multiple occupations.

The position of houses with nine or more rooms remained unchanged, both as regards the number of houses and occupants.

GENERAL.

One of the most remarkable features of the 1931 Census was its contribution to the proof of the change in the age distribution of the population. This alteration has been a character of the Census returns since the closing periods of the 19th century, but it is now far more conspicuous than it was. So great, indeed, is the alteration that the total increases of population now recorded at each Census are made up of increases in the number of older people of such magnitude as to more than counter-balance the diminution in the number of new lives in consequence of the decline in the number of births.

In a population subject to a predominating degree to the law of natural increase, that is to say, the excess of births over deaths, it will be evident that the greatest number of persons will be found at the earliest ages, since all other ages are affected by death attrition.

Hence, at every enumeration of the population up to and including the Census of 1911, the age distribution of the population has shown the highest number at under 5 years of age, every subsequent 5 yearly age period showing diminishing numbers.

A small number survive to the age of 90, but there are very few left at ages over 95.

At the Census of 1921 this normal age distribution was broken for the first time, there being greater numbers alive at age periods 5-10, 10-15 and 15-20 years than under 5 years. At this Census the greatest number was recorded at the 10-15 age period.

At the 1931 Census this process was emphasised. The greatest number of persons was enumerated at the 15-20 age period, and the under 5 age period was exceeded by the 5-10, 10-15, 15-20, 20-25, and 25-30 age periods. Thereafter the declines in relation to the 0-5 age period continued in accordance with the usual rule, but the difference between the populations at each age period tended to be less pronounced until ages over 65 were reached.

In 1841 there were 329 persons living over the age of 75 years. In 1931 there were 2,169, or more than 6½ times as many. In the same period the population at all ages increased rather less than 3½ times.

In a population showing continuous intercensal increases in persons of all ages, it would follow naturally that at each Census, increases would be expected at each age period throughout the series. This is exactly what has occurred locally up to 1911, the variations recorded being merely evidence of those inevitable fluctuations which affect the detail of the constitution of all limited communities.

The first real break in this rule was shown at the 1921 Census, when the decline in birth numbers caused the population under 5 years of age to show a substantial decline from that of 1911, a position which was maintained at the 1931 enumeration.

This birth decline shows itself very definitely in the 5-10 age group. The maximum number of persons at this age period was found between 1911 and 1915. Since that time the numbers have declined steadily. The number at the moment is about the same as at the beginning of the century.

At 10-15 years of age the maximum numbers were recorded about 1920-1922. Since that date the numbers have declined rapidly, the population at this age in 1931 having receded to the position about 1905.

At all other age periods the population continues to show increases, especially the female, partly owing to the lower fatality rates of females at practically all ages and partly to the immigration of young women as domestic and other workers.

The increases become greater as age advances.

It is profitable to compare the 1931 Census figures with those of 1901. We have seen that substantial declines have been recorded at ages under 5, 10 and 15 years.

Between 15 and 20, the population increased by about 6%, and between 20 and 30 by 24%.

Between 30 and 40, there was an increase of 35%, and between 40 and 50 of 63%.

Between 50 and 60 the increase was 98%, and between 60 and 70 104%.

At all ages over 70 years the Census population increased by 96% as compared with 1901.

These figures state the case with admirable and convincing clarity.

13% of the people, or about 1 person in 8, was over the age of 50 at the 1901 Census. At that of 1931 the proportion had increased to 20%, or, in other words, one person in 5 was over 50 years of age.

In the face of a declining Birth-rate these facts are of enormous economic importance, but they are the kind of facts which make no appeal either to public opinion, whatever that is, or to the business or political worlds.

There are three facts of prime importance that are more than emphasised by the 1931 Census. They have all been stated, but they will bear repetition :—

1. The decline in the number of young people in the population in consequence of the decline in the Birth-rate.
2. The decrease in the number of persons per family in consequence of family limitation.
3. The ageing of the population due to the declines in the Death-rates at all periods, but particularly those under 25 years of age.

MARRIAGES.

713 marriages were registered in Ipswich in 1933, as compared with 694 in the previous year.

The facts with regard to the marriage rate in Ipswich are set forth in the Table :—

Periods.	No. of Marriages.	Marriage rates per 1000 living.	
		Ipswich.	England & Wales.
1841—1850	2,815	19.43	16.1
1851—1860	3,302	18.70	16.9
1861—1870	3,550	17.64	16.6
1871—1880	4,143	17.77	16.2
1881—1890	4,152	15.37	14.9
1891—1900	4,777	15.43	15.6
1901—1910	5,209	14.86	15.5
1911—1920	6,819	17.83	16.6
1921—1930	6,740	16.20	15.5
1841—1845	1,239	18.29	15.7
1846—1850	1,576	20.42	16.5
1851—1855	1,689	19.84	17.1
1856—1860	1,613	17.65	16.7
1861—1865	1,790	18.35	16.8
1866—1870	1,760	16.96	16.4
1871—1875	2,072	18.56	17.1
1876—1880	2,071	17.04	15.3
1881—1885	2,170	16.59	15.2
1886—1890	1,982	14.22	14.7
1891—1895	2,326	15.60	15.1
1896—1900	2,451	15.28	16.1
1901—1905	2,560	14.99	15.6
1906—1910	2,649	14.73	15.3
1911—1915	3,201	16.94	16.4
1916—1920	3,618	18.70	16.8
1921—1925	3,316	16.34	15.7
1926—1930	3,424	16.06	15.4
1921	701	17.63	16.9
1922	635	15.80	15.7
1923	662	16.31	15.2
1924	600	14.68	15.3
1925	718	17.34	15.2
1926	654	15.64	14.3
1927	675	15.98	15.7
1928	680	15.95	15.4
1929	714	16.59	15.8
1930	701	16.13	15.8
1931	679	15.48	15.6
1932	694	15.72	15.2
1933	713	16.00	15.7

BIRTHS.

1,274 Births were registered in 1933, as compared with 1,363, 1,371, 1,468, 1,438, and 1,424 respectively in the five preceding years. The number of Births in 1933 was the lowest since 1864.

The facts as to the number of Births registered and the Birth-rates are set forth as follows:—

Periods.	Number.			Rates per 1,000 living.	
	Males.	Females.	Persons	**Ipswich.**	England and Wales.
1841—1850	4,783	4,608	9,391	**32.4**	32.6
1851—1860	6,088	5,837	11,925	**33.7**	34.1
1861—1870	6,805	6,488	13,293	**33.0**	35.2
1871—1880	8,005	7,606	15,611	**33.4**	35.4
1881—1890	8,619	8,485	17,104	**31.6**	32.4
1891—1900	9,058	8,729	17,787	**28.7**	29.9
1901—1910	9,586	9,212	18,798	**26.8**	27.2
1911—1920	8,436	8,102	16,538	**21.6**	21.8
1921—1930	7,602	7,396	14,998	**18.0**	18.3
1841—1845	2,036	2,056	4,092	**30.2**	32.3
1846—1850	2,747	2,552	5,299	**34.3**	32.8
1851—1855	2,914	2,864	5,778	**33.9**	33.9
1856—1860	3,174	2,973	6,147	**33.6**	34.4
1861—1865	3,308	3,144	6,452	**33.0**	35.1
1866—1870	3,497	3,344	6,841	**32.9**	35.3
1871—1875	3,820	3,646	7,466	**33.4**	35.5
1876—1880	4,185	3,960	8,145	**33.5**	35.3
1881—1885	4,258	4,230	8,488	**32.4**	33.5
1886—1890	4,361	4,255	8,616	**30.9**	31.4
1891—1895	4,444	4,339	8,783	**29.4**	30.5
1896—1900	4,614	4,390	9,004	**28.0**	29.3
1901—1905	4,899	4,719	9,618	**28.1**	28.2
1906—1910	4,687	4,493	9,180	**25.5**	26.3
1911—1915	4,481	4,271	8,752	**23.1**	23.6
1916—1920	3,955	3,831	7,786	**20.1**	20.1
1921—1925	3,829	3,883	7,712	**19.0**	19.9
1926—1930	3,773	3,513	7,286	**17.1**	16.7
1921	844	880	1,724	**21.7**	22.4
1922	773	813	1,586	**19.7**	20.6
1923	782	766	1,548	**19.1**	19.7
1924	735	698	1,433	**17.5**	18.8
1925	695	726	1,421	**17.1**	18.3
1926	777	763	1,540	**18.4**	17.8
1927	729	687	1,416	**16.8**	16.7
1928	768	656	1,424	**16.7**	16.7
1929	725	713	1,438	**16.7**	16.3
1930	774	694	1,468	**16.9**	16.3
1931	702	669	1,371	**15.6**	15.8
1932	671	692	1,363	**15.4**	15.3
1933	660	614	1,274	**14.3**	14.4

The Birth-rate for 1933 was by far the lowest ever registered. This is forcibly illustrated by the fact that although the number of Births registered in 1864 was the same as that in 1933, the Birth-rate in the former year was 32.2 per 1,000 living, whereas in 1933 the rate had fallen to 14.3 per 1,000 living.

The causes of the decline in the Birth-rate have been discussed in detail in these Reports, and it remains only to reiterate, with added conviction, the view, that those who believe that causes other than deliberate artificial restriction of family are in the main responsible for the present state of affairs have misread alike the spirit of the age and the laws of Biology.

The decline in the Birth-rate began in Ipswich between 1881 and 1885, and it is significant that the decline in the National Birth-rate dates from the same period, so that the local variation is shown as merely part of the national trend. Throughout the whole series since that period the local rates have followed the national more or less closely. In 1916-1920 the local and national rates were equal.

There is no evidence in any of the recent statistics that the decline in the Birth-rate has been arrested.

The Birth and Death-rates are now closer together than they have ever been, so far as our knowledge goes.

ANNUAL NUMBER, SEX AND LEGITIMACY OF THE BIRTHS.

The experience since 1921 is shown in the following Table :—

Year.	Legitimate.			Illegitimate.			All Births.			Males per 1,000 Females.
	M.	F	P.	M.	F.	P.	M.	F.	P.	
1921	808	831	1,639	36	49	85	844	880	1.724	959
1922	731	777	1 508	42	36	78	773	813	1,586	958
1923	754	733	1,487	28	33	61	782	766	1,548	1,021
1924	700	669	1,369	35	29	64	735	698	1,433	1,053
1925	661	695	1,356	34	31	65	695	726	1,421	957
1926	748	735	1,483	29	28	57	777	763	1,540	1,018
1927	689	665	1,354	40	22	62	729	687	1,416	1,061
1928	736	625	1,361	32	31	63	768	656	1,424	1.170
1929	694	678	1,372	31	35	66	725	713	1,438	1,017
1930	742	669	1,411	32	25	57	774	694	1,468	1,115
1921-1930	7,263	7,077	14,340	339	319	658	7,602	7,396	14,998	1,028
1931	668	635	1,303	34	34	68	702	669	1,371	1,049
1932	641	656	1,297	30	36	66	671	692	1,363	969
1933	625	581	1,206	35	33	68	660	614	1,274	1,075

There was nothing very unusual about the figures for 1933 apart from the numbers.

The proportion of Illegitimate Births was higher than usual.

The proportion of males to females swung back to the normal male excess, thereby restoring the combined experience of the years 1932 and 1933 very nearly to the average.

TWIN BIRTHS.

24 Twin Pregnancies were recorded in 1933, resulting in the birth of 43 living children and 5 stillbirths.

Of the Pregnancies 4 were Male Twins, 9 Female Twins, and 11 Mixed Twins.

The percentage of Stillbirths was 10.4%, very near the average.

The local Twin records show that in the years 1921-1933 inclusive, there have been 230 Twin Pregnancies, resulting in the birth of 412 live and 48 dead children. In terms of potential lives, therefore, 89.56% of the infants were born alive and 10.44% were born dead.

In the period 1921-1933, there have been 38 Twin Pregnancies associated with stillbirth, a proportion of 16.5%, which is far in excess of the experience of single births.

DEATHS AND DEATH-RATES FROM ALL CAUSES AT ALL AGES.

I give a Table showing the crude death-rates recorded for Ipswich as contrasted with those of England and Wales since 1841 :—

Periods.	No. of Deaths (Ipswich).			Crude Death-rates per 1000 living					
				Males.		Females.		Persons.	
	M.	F	P.	Ipswich	E. & W.	Ipswich	E. & W	Ipswich	E. & W.
1841—1850	3,245	3,324	6.569	23.86	23.1	21.62	21.6	22.67	22.4
1851—1860	3,863	3,987	7.850	23.39	23.1	21.22	21.4	22.24	22.2
1861—1870	4,440	4.480	8.920	23.66	23.7	20.84	21.4	22.16	22.5
1871—1880	5,273	5.044	10.317	24.15	22.7	20.34	20.1	22.12	21.4
1881—1890	5.053	5.016	10.069	20.02	20.3	17.43	18.1	18.64	19.1
1891—1900	5,649	5.529	11,178	19.56	19.3	16.74	17.1	18.06	18.2
1901—1910	5,335	5,231	10.566	16.17	16.4	14.09	14.4	15.07	15.4
1911—1920	5,270	5,283	10.553	14.56	15.9	13.10	13.0	13.19	14.3
1921—1930	4.604	4,778	9,382	11.76	12.9	10.88	11.4	11.29	12.1
1841—1845	1,402	1.417	2.819	22.07	22.1	19.70	20.6	20.81	21.4
1846—1850	1,843	1,907	3,750	25.43	24.1	23.43	22.6	24.30	23.3
1851—1855	1,989	1.971	3.960	24.90	23.5	21.80	21.8	23.26	22.7
1856—1860	1,874	2,016	3,890	21.97	22.6	20.69	21.0	21.29	21.8
1861—1865	2,235	2.314	4.549	24.59	23.7	22.21	21.5	23.32	22.6
1866—1870	2,205	2.166	4,371	22.79	23.7	19.56	21.2	21.07	22.4
1871—1875	2.586	2,440	5,026	24.78	23.3	20.52	20.7	22.51	22.0
1876—1880	2,687	2.604	5.291	23.58	22.1	20.16	19.5	21.76	20.8
1881—1885	2,496	2,505	5.001	20.37	20.5	18.01	18.3	19.12	19.4
1886—1890	2.557	2.511	5,068	19.69	20.0	16.88	17.8	18.19	18.9
1891—1895	2.841	2.760	5.601	20.46	19.8	17.32	17.7	18.78	18.7
1896—1900	2,808	2,769	5.577	18.73	18.8	16.20	16.6	17.38	17.7
1901—1905	2,692	2,636	5.328	16.80	17.1	14.55	15.0	15.60	16.0
1906—1910	2.643	2.595	5.238	15.57	15.6	13.66	13.8	14.56	14.7
1911—1915	2.765	2.597	5,362	15.43	15.1	13.06	13.2	14.19	14.3
1916—1920	2,505	2,686	5.191	13.71	16.5	13.14	12.8	13.41	14.4
1921—1925	2,200	2,330	4,530	11.53	13.0	10.87	11.4	11.18	12.2
1926—1930	2,404	2,448	4,852	11.98	12.9	10.89	11.4	11.40	12.1
1911	462	483	945	13.17	15.6	12.37	13.7	12.75	14.6
1912	582	555	1.137	16.40	14.2	14.08	12.6	15.18	13.4
1913	567	488	1,055	15.80	14.8	12.27	12.9	13.94	13.8
1914	546	518	1.061	15.05	14.9	12.90	13.1	13.92	14.0
1915	608	553	1.161	16.70	17.7	13.70	14.0	15.12	15.7
1916	506	521	1.027	13.90	16.6	12.87	12.5	13.36	14.3
1917	521	533	1,054	14.32	17.1	13.12	12.1	13.69	14.2
1918	540	606	1,146	14.84	20.1	14.88	15.2	14.86	17.3
1919	488	527	1.015	13.36	15.7	12.85	12.6	13.09	14.0
1920	450	499	949	12.17	13.5	12.01	11.5	12.09	12.4
1921	432	459	891	11.56	13.0	10.92	11.3	11.22	12.1
1922	448	526	974	11.86	13.6	12.39	12.0	12.14	12.8
1923	411	427	838	10.77	12.4	9.96	10.9	10.34	11.6
1924	398	403	801	10.32	12.9	9.31	11.5	9.79	12.2
1925	511	515	1,026	13.12	12.9	11.78	11.4	12.41	12.2
1926	440	429	869	11.18	12.4	9.72	10.9	10.41	11.6
1927	516	544	1,060	12.99	13.1	12.21	11.6	12.58	12.3
1928	481	479	960	11.99	12.5	10.65	10.9	11.28	11.7
1929	505	545	1,050	12.46	14.2	12.01	12.7	12.22	13.4
1930	462	451	913	11.29	12.3	9.84	10.7	10.53	11.4
1931	487	542	1,029	11.76	13.0	11.71	11.6	11.73	12.3
1932	495	573	1,068	11.88	12.7	12.33	11.4	12.12	12.0
1933	487	532	1,019	11.58		11.30	—	11.44	12.3

The principal features of this Table have been examined in these reports from various angles.

On this occasion, it will suffice to draw attention to the remarkable improvement in the health conditions of the people as evidenced by the decline in the death-rate of over 50% within the period of 93 years comprised in the Table.

It is advisable to pay close attention to the recent movements of the rates for the whole country as well as locally, since it is evident that the fall in the death-rate has been checked since 1921-1925.

The lowest average death-rate was 11.18, recorded in the period 1921-1925. It rose in the following five years to 11.40, and in the three years 1931-1933 to 11.73.

The age distribution of the death-rates in 1931-1933 shows that at all ages under 65 years of age, the death-rates fell below the averages of the Decennium 1921-1930, with the exceptions of the age periods 5-15 and 25-35. In these instances there was a small increase.

Over 65 years of age, there was a definite increase in 1931-1933 over the average of 1921-1930, sufficient to neutralise the gains already mentioned and establish a balance on the wrong side.

This gives further proof of the tendency of modern death-rates to diminish progressively at all ages under 65 or 70.

With regard to the death-rates over 70 years of age, these also have declined to some extent since our records began, reaching their lowest point in 1921-1930. During the last three years the death-rates at these ages have returned very nearly to the average of 1911-1920. Here is to be found the explanation of the increase in the death-rate at all ages in our recent statistics.

Our statistics show that gradually the proportion of persons dying over the age of 70 to deaths at all ages is becoming greater and greater, so that the female deaths over this age are now in the vicinity of one-half of the total female deaths at all ages, and the male deaths at the same ages in the vicinity of 40% of the total male deaths at all ages.

The death-rates are thus established on their way towards the goal of the elimination of the preventable deaths of the young, and their replacement by the inevitable deaths of the aged.

These considerations lead to the examination of the causes of the General Death-rate. These will be considered in some detail in the special sections dealing with different diseases, but one well-marked feature of modern vital statistics requires examination at this point.

No student of mortality statistics can fail to have observed that modern mortality statistics are concerned to an ever increasing degree with degenerations of various kinds, and that the acute diseases have become relegated to a second place in the production of the General Death-rate. This change is intimately associated with the change in the age incidence of the mortality rates, to which reference is made in various parts of this report.

In general, acute diseases destroy the young, degenerations the old.

The death of the young is a violation of the laws of nature; the death of the old, their fulfilment.

Realisation of the profound significance of this fact gives a reorientation to the study of comparative vital statistics, and invests the section of this Report dealing with the age distribution of the death-rates over a period of 90 years with peculiar importance.

QUARTERLY DEATH-RATES.

Decennial Periods.	March		June.		September		December	
	Death-rates.		Death-rates		Death-rates.		Death-rates	
	Ipswich	England & Wales.	Ipswich	England & Wales	Ipswich	England & Wales.	Ipswich	England & Wales.
1841 1850	24.05	24.7	21.12	22.0	23.09	21.0	22.44	21.7
1851 1860	23.61	24.7	20.56	22.1	22.34	20.3	22.45	21.9
1861 – 1870	23.84	25.2	20.38	21.8	22.18	21.0	22.26	22.1
1871 1880	24.05	23.7	20.81	20.9	21.60	19.6	22.07	21.3
1881 1890	20.92	21.6	17.15	18.7	17.18	17.3	19.29	19.1
1891 1900	20.69	20.7	15.99	17.6	18.17	17.0	17.41	17.7
1901 – 1910	17.84	17.7	13.89	14.6	13.53	13.8	15.15	15.4
1911 — 1920	17.15	17.2	12.84	13.6	11.32	11.8	13.93	15.0
1921 - 1930	14.83	15.5	10.42	11.7	8.82	9.5	11.12	11.8
1931	16.10	16.5	10.93	11.5	9.41	9.6	10.54	11.7
1932	17.10	15.4	10.23	11.6	9.45	9.7	11.56	11.5
1933	13.52		10.76		9.75		11.75	—

As usual mortality was highest in the March Quarter and lowest in the September.

The only really notable feature of the experience of 1933 was the unusually low mortality of the March Quarter.

This was due largely to a low rate of Respiratory mortality in consequence of the favourable meteorological conditions prevailing at the time.

MONTHLY DEATH-RATES.

Month	1841 1880	1881 1900	1901 1910	1911 1920	1921 1930.	1931	1932	1933
January	24.02	21.52	18.64	15.81	15.60	12.46	14.80	13.22
February	24.21	20.37	18.19	19.22	15.23	16.87	18.69	17.41
March	23.40	21.49	16.74	16.61	13.70	18.89	17.87	10.31
April	21.88	18.36	14.95	14.34	11.70	12.14	9.79	10.79
May	20.95	16.33	14.16	12.86	9.98	8.97	9.60	10.57
June	19.25	14.89	12.29	11.32	9.61	11.73	11.31	10.92
July	18.00	15.15	11.96	10.57	9.03	9.51	10.40	8.19
August	23.11	19.08	14.01	11.43	8.80	8.73	9.87	10.18
September	25.66	18.95	14.64	12.01	8.61	9.93	8.00	10.92
October	21.59	17.12	13.66	12.13	10.06	10,05	10.93	9.12
November	21.17	17.37	15.28	16.08	10.84	10.06	9.79	10.92
December	24.05	20.45	16.50	13.65	12.48	10.85	13.87	15.20
Whole Year	22.27	18.33	15,00	13.80	11.27	11.73	12.12	11.44

The lowest mortality was recorded in July, and the highest in February (Influenza).

A notable feature was the altogether unusual steadiness of the Monthly Death-rates throughout the greater part of the year.

The mortality rate for January was low, whilst that of December was considerably above the average recent experience.

It is probable that the altogether abnormal nature of the meteorological conditions of the year affords an adequate explanation of these unusual death-rates.

AGE AND SEX DISTRIBUTION OF THE DEATH-RATES PER MILLION LIVING FROM ALL CAUSES AT 18 AGE PERIODS.

Age Periods	1841 — 1880			1881 — 1900			1901 — 1910			1911 — 1920			1921 — 1930		
	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P
— 5	72.109	62.933	67.584	62.220	49.186	55.630	48.136	39.867	44.006	36.652	26.923	31.811	19.883	14.502	17.207
—10	7.084	7.130	7.107	4.430	4.518	4.494	3.316	3.799	3.618	3.614	3.960	3.784	2.130	2.170	2.150
—15	3.821	4.647	4.235	2.634	2.893	2.765	1.785	2.058	1.925	2.322	2.551	2.438	1.356	1.273	1.314
—20	6.465	6.231	6.337	4.017	4.183	4.121	2.570	2.599	2.585	2.788	3.106	2.954	2.126	1.841	1.977
—25	8.531	7.708	8.066	5.146	4.880	5.044	4.292	3.601	3.920	4.256	4.222	4.237	2.753	3.043	2.913
—30	9.980	9.574	9.758	6.741	5.852	6.257	4.711	3.421	4.012	5.043	4.525	4.768	2.990	3.075	3.034
—35	11.083	10.130	10.561	8.037	6.693	7.317	6.210	5.152	5.644	5.189	5.270	5.231	4.109	3.154	3.597
—40	12.861	13.066	12.970	10.812	8.797	9.737	7.328	6.653	6.968	6.563	6.026	6.277	4.931	3.483	4.159
—45	14.625	12.267	13.341	11.989	10.610	11.248	10.588	7.419	8.906	8.366	7.227	7.761	6.845	5.112	5.931
—50	18.155	15.517	16.739	15.073	12.417	13.632	13.557	10.782	12.076	10.717	8.956	9.786	9.169	6.630	7.850
—55	20.515	16.522	18.347	18.945	14.739	16.658	16.025	11.812	13.733	15.818	10.757	13.090	13.237	8.470	10.724
—60	29.697	23.889	26.540	25.764	22.277	23.840	21.194	18.219	20.971	22.257	15.783	18.812	15.900	13.082	14.403
—65	37.759	30.870	33.930	37.835	27.064	31.778	33.694	24.112	28.301	29.616	23.225	26.053	25.438	18.919	21.854
—70	57.959	47.728	52.352	58.046	51.239	54.279	46.669	34.183	39.489	50.257	38.026	43.328	39.085	32.344	35.340
—75	78.802	64.338	70.336	79.030	69.817	73.811	79.258	68.761	73.039	74.990	57.118	64.074	70.056	51.544	59.050
—80	126.727	121.891	124.051	131.889	113.545	121.202	117.264	105.200	110.158	117.921	93.463	102.907	104.462	86.256	93.126
—85	201.039	155.205	172.498	179.125	167.377	172.207	161.110	157.271	158.938	164.469	152.998	157.321	156.405	144.630	148.959
+85	319.924	303.987	309.666	333.860	263.782	285.229	276.672	228.346	245.378	265.228	239.393	249.051	284.250	254.215	264.063
All Ages	23.792	20.929	22.268	19.780	17.064	18.332	16.173	14.096	15.074	14.569	13.108	13.799	11.766	10.882	11.299
+70	123.067	111.007	116.008	118.559	109.360	113.212	116.004	104.002	108.912	114.637	96.452	103.459	104.182	90.820	95.982

Since, at any age period, the number of persons living represents the survivors from all previous age periods, it follows that the age distribution of the death-rates is of the first importance in any series of vital statistics.

It has been shown, on many occasions, that the death-rates at all ages at the present day have declined by 50% when compared with the experience of 1841-1850, which is another way of stating that the survivors at all ages are double what they were.

It is possible to distinguish three distinct periods in this relation:—

1. 1841-1880. The average death-rate of this period was 22.268 per 1,000 living, the range varying from 22.676 in 1841-1850, to 22.127 in 1871-1880, a decline of about 2½%. The fall was confined to ages under 25 years, but was substantial enough within these age limits alone to influence the death-rates at all ages to the extent indicated.

2. 1881-1900. In this period the average death-rate at all ages fell sharply to 18.332 per 1,000 living, a decline of 18% as compared with the average of the previous 40 years.

When the average death-rates at each age period in 1881-1900 are compared with the corresponding rates for 1841-1880, it is found that the changes in the death-rates foreshadowed in the former period are amplified at the same age periods and greatly extended so as to include all age periods up to 65 years of age. Over 65 years of age the average death-rates of the two periods were practically identical. The declines were greatest between the ages of 5 and 35, which averaged about 35%.

Between 35 and 50 years of age the average decline was about 20%, whilst between 50 and 65 years it was less than 10%.

Under 5 years of age there was a very substantial and suggestive decline of 18%.

Thus in the last 20 years of the nineteenth century the behaviour and age distribution of the death-rates indicated quite clearly the position actually realised at the present day.

3. 1901-1930. Since the beginning of the present century the tendencies exhibited at the end of the last century have continued to

exert their influence to an ever-increasing degree. The result is that at the present moment the death-rates recorded at each and every age period are by far the lowest recorded in our whole series since 1841.

The declines have been continuous throughout the present century, and include every age period, even those over 80 years of age. If the decennium 1921-1930 be compared with the averages of the period 1881-1900, we record a decline of 70% in the mortality experience under 5 years of age, and of over 50% for each age period (except 20-25, 43%) from 5 to 40 years of age.

Between 40 and 50 the decline was about 45%, between 50 and 60 just under 40%, between 60 and 70 about 33%, and about 14% for all ages over 70 years.

We have shown clearly in the foregoing investigation that the changes in the age distribution of the death-rates have been going on for over 50 years, and thus we are provided with the true explanation of the age distribution of the population at the present day. It has been proved that not only do increasing numbers of people survive to greater ages, but that those living at the higher ages have an increased expectation of life.

This obviously is a process that must adjust itself in due course, and some adjustment is actually now in progress. We have shown that the decline in the average local death-rates at all ages has stopped.

Examination of the age distribution of the death-rates shows that, whatever the period or the death-rate at all ages, the lowest death-rates are invariably recorded for the age period 10-14. Actually, the years of lowest mortality experience are 11, 12 and 13. The next lowest is the age period 15-19. This is true not only of the experience of the present day, but of the averages for the period 1841-1900.

The same considerations apply to the third lowest age period, viz., 5-9.

After the 15-19 age period the death-rates rise steadily but not steeply up to the age period 50-54. Thereafter the death-rates rise rapidly to the maximum at ages over 85, at which the mortality is about 1 in 4.

The death-rates under 5 years of age include the infant deaths, which really determine the position of these particular death-rates. In consequence, the remarkable decline in the death-rate of this particular group is largely identifiable with the decline in Infant Mortality, which is such a conspicuous feature of the vital statistics of this century.

Additional light upon the age distribution of the deaths is shed by the following Table, in which is set forth, in decennial periods, the age groups responsible for 25%, 50% and 75% of the total enumerated deaths.

Periods.	25%	50%	75%
1841—1850	- 1	20	57
1851—1860	1	22	59
1861 1870	1 2	24	- 61
1871—1880	- 1 2	30	— 63
1881 -1890	1 3	— 32	— 65
1891—1900	- 1	35	69
1901—1910	1 5	- 43	— 70
1911—1920	11 3	- 54	—72
1921 1930	38 5	64	76

From this it appears that from 1841-1910 the deaths under 1 year of age or just over were sufficiently numerous to provide one quarter of the total deaths registered at all ages.

In 1911-1920, on the other hand, the diminution in the number of deaths under 1 year was so great that it was necessary to add together all the deaths up to just over 11 years of age, in order to make up the proportion of 25%.

In 1921-1930 it was necessary to include all the deaths up to over 38 years of age to provide the requisite number.

This part of the Table brings home with dramatic force the enormous change in the mortality experience of young people under modern conditions.

It comes as a shock to the modern mind that in 1841-1850 one-half of the recorded deaths were of people under 20 years of age. There was little change in this position up to 1870, but between that date and the end of the nineteenth century the requisite age rose to 34. It does not say a great deal for the health conditions of a community that at the end of the nineteenth century, one-half of the total mortality was of persons under 35 years of age.

Since the beginning of this century, the 50% age has advanced to 64, nearly double that at the end of the nineteenth century. For this, the very large decline in the number of deaths of infants, the further large diminution in the deaths at all ages up to 40 years and the substantial fall thereafter, are responsible.

So far as the 75% group is concerned, the considerations advanced already apply, but naturally not to the same degree. Nevertheless, it is possible to record that the ages comprised in this group have risen from 57 in 1841-1850, to 76 in 1921-1930.

In general terms, this Table drives home the fact stated in the age and sex Tables, that the change in the mortality experience of the present day is due to the fall in the death-rates of young people mainly, though there is a definite decline at all age periods.

PRINCIPAL CAUSES OF DEATH FROM ALL CAUSES AT ALL AGES, 1933.

Numbers of deaths and Death-rates per 1,000 living.

Causes of Death.	Males.		Females.		Persons.	
	No.	Rates.	No.	Rates.	No.	Rates.
Heart Diseases	107	2.54	122	2.59	229	2.57
Cancer	59	1.40	95	2.01	154	1.72
Bronchitis	31	.73	33	.70	64	.71
Tuberculosis	35	.83	24	.51	59	.66
Cerebral Haemorrhage etc	19	.45	39	.83	58	.65
Pneumonia	28	.66	27	.57	55	.61
Violence	30	.71	19	.40	49	.55
Infant Atrophy, etc	19	.45	21	.44	40	.44
Arterio Sclerosis	24	.57	13	.27	37	.41
Influenza	15	.35	16	.34	31	.34
Bright's Disease	12	.28	14	.29	26	.29
Senility	4	.09	14	.29	18	.20
All Others	104	2.47	95	2.01	199	2.23
Total	487	11.58	532	11.30	1019	11.44

There is no change in the relative positions of the first four causes of death, which have, in fact, been exactly the same since 1931.

The Infant group returns to the list once more, but the 7 principal Zymotic Diseases fall out.

The deaths ascribed to Senility, pure and simple, become fewer and fewer.

Arterio Sclerosis holds a permanent place amongst the chief causes of death.

DEATHS AND DEATH-RATES OVER 70 YEARS OF AGE.

Deaths and Death-rates over 70 Years of Age.

	Deaths.			Death-Rates per million living.			Proportions of Total Deaths at all ages.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
1841–1850	427	537	964	122 000	116.133	118.660	13.15	16.15	14 67
1851 1860	513	657	1170	118.012	108.272	112.337	13.27	16.47	14.90
1861–1870	626	773	1399	118.269	100.520	107.756	14 09	17.25	15 68
1871–1880	801	1045	1846	131.462	119 414	124.360	15.19	20 71	17.89
1881 1890	849	1046	1895	121.130	106.712	112.723	16.90	20 85	18 78
1891–1900	983	1301	2284	116.427	111.587	113 620	17.40	23.53	20,43
1901—1910	1130	1463	2593	116.004	104 002	108,912	21.18	27.96	24.54
1911 –1920	1268	1702	2970	114,637	96.452	103.459	24 06	32.21	28,14
1921 1930	1477	2045	3522	104.182	90.820	95.982	32.08	42.80	37.53
1841–1845	195	253	448	120.000	119 114	119.498	13.90	17.85	15.96
1846–1850	232	284	516	123,733	113.600	117.942	12.58	14.89	13 76
1851—1855	260	314	574	125.120	109.943	116.335	13.17	15.93	14,49
1856—1860	253	343	596	111,502	106.787	108.739	13 50	17 01	15.32
1861–1865	310	369	679	123.950	102.357	111,202	13 87	15.94	14.92
1866 1870	316	404	720	113.180	98.898	104.696	14 33	18 65	16 47
1871—1875	414	515	929	138 322	118 227	126.411	16 00	21.10	18.48
1876—1880	387	530	917	124.838	120.591	122.348	14.40	20.35	17.33
1881–1885	414	497	911	124.736	107,250	114 547	16 58	19.84	18 21
1886–1890	435	549	984	117.886	106.230	111,086	17 01	21 86	19 41
1891–1895	470	637	1107	116 192	112.963	114 312	16 54	23 07	19 76
1896–1900	513	664	1177	116.643	110.299	112.977	18 26	23 97	21 10
1901 1905	529	665	1194	111 933	100.590	105 318	19 65	25 22	22.40
1906–1910	601	798	1399	119.840	107 027	112 180	22 73	30 75	26 70
1911–1915	656	838	1494	122,800	100 407	109.116	23.72	32 26	27 86
1916 1920	612	864	1476	107.011	92 903	98 275	24 13	32.16	28 43
1921 1925	651	970	1621	100.540	92 345	95,468	29 59	41.63	35 78
1926 1930	826	1075	1901	107.244	89 486	96 121	31,35	43 91	39 17
1931	179	232	411	105 979	89 783	96.185	36 75	42 80	39 91
1932	197	274	471	115 474	104.860	109 053	39.79	47.81	14 10
1933	202	238	440	117 715	90 735	101 105	41 47	44 73	43 20

Thus it appears that there has been some decline in the mortality experience of persons 70 years of age and over since the beginning of this century, especially females.

At the same time, the proportion of deaths of persons at these ages to deaths at all ages has practically doubled itself since the beginning of this century.

At the time of writing, over 40% of the deaths of males and 45% of the deaths of females are of the age of 70 or more.

The death-rates show that these proportions are not due to increase in the Mortality Rates at these ages, but to the diminution in the Mortality Rates of young people.

Reference to the Table showing the age distribution of the death-rates will make this point clear.

The principal causes of Deaths at ages of 70 and over are set forth in the following Table :—

Causes of Death.	Males.	Females.	Persons.	Death Rates.
Heart Diseases	69	79	148	34.109
Cancer	26	35	61	14.058
Bronchitis	21	28	49	11.292
Cerebral Hæmorrhage, etc.	19	20	39	8.988
Senility	4	14	18	4.148
Pneumonia	5	8	13	2.996
Influenza	6	5	11	2.535
Bright's Disease ...	4	4	8	1.843
All other causes ...	48	46	94	21.663
Total	202	239	441	101.636

Diseases of the Heart, principally Degenerations of the Heart Muscle, occupy a predominant position, chiefly at the expense of Senile Decay.

One person in three over 70 years of age, dies from some form of Heart Degeneration.

Cancer comes next in the list with a rate showing that one person in seven at this age succumbs to the malady.

One person in nine dies from Bronchitis, and one in eleven from Cerebral Hæmorrhage.

The central fact in the mortality of old persons is that relatively few die from Acute Diseases, Degenerations of many kinds claiming the large majority of victims.

MORTALITY FROM THE SEVEN PRINCIPAL ZYMOTI DISEASES.

The group includes Enteric Fever, Smallpox, Scarlet Fever, Diphtheria, Measles, Whooping Cough and Diarrhœa under two years of age.

Periods	Males Nos.	Males Rates	Females Nos.	Females Rates	Persons Nos.	Persons Rates
1841 — 1850	401	2.94	383	2.48	784	2.70
1851 — 1860	438	2.64	471	2.50	909	2.57
1861 — 1870	523	2.73	539	2.50	1062	2.61
1871 — 1880	737	3.37	688	2.77	1425	3.04
1881 — 1890	514	2.03	528	1.83	1042	1.92
1891 — 1900	740	2.56	685	2.07	1425	2.29
1901 — 1910	486	1.47	443	1.19	929	1.31
1911 — 1920	347	.95	291	.72	638	.83
1921 — 1930	130	.33	120	.27	250	.30
1841 — 1845	120	1.88	102	1.41	222	1.64
1846 — 1850	281	3.87	281	3.43	562	3.64
1851 — 1855	229	2.86	249	2.75	478	2.80
1856 — 1860	209	2.45	222	2.27	431	2.36
1861 — 1865	309	3.40	340	3.26	649	3.32
1866 — 1870	214	2.21	199	1.80	413	1.99
1871 — 1875	389	3.72	339	2.85	728	3.26
1876 — 1880	348	3.05	349	2.70	697	2.86
1881 — 1885	215	1.75	253	1.82	468	1.79
1886 — 1890	299	2.30	275	1.84	574	2.06
1891 — 1895	321	2.31	304	1.90	625	2.09
1896 — 1900	419	2.79	381	2.23	800	2.49
1901 — 1905	280	1.74	244	1.34	524	1.53
1906 — 1910	206	1.21	199	1.04	405	1.12
1911 — 1915	230	1.28	193	.97	423	1.12
1916 — 1920	117	.64	98	.48	215	.55
1921 — 1925	65	.34	71	.33	136	.33
1926 — 1930	65	.32	49	.21	114	.26
1926	12	.30	1	.02	13	.15
1927	13	.32	14	.31	27	.32
1928	16	.39	8	.17	24	.28
1929	9	.22	12	.26	21	.24
1930	15	.36	14	.30	29	.33
1931	17	.40	25	.54	42	.47
1932	13	.31	7	.15	20	.22
1933	6	.14	7	.14	13	.14

Thirteen deaths were registered in this group in 1933. This is one f the lowest returns recorded in the 93 years comprised in the Table. t was surpassed once only, in 1923 (10 deaths) and equalled twice, 924 and 1926.

The death-rate was the lowest recorded, with the exception of 1923 (.12).

The deaths included 7 from Diphtheria, 3 from Whooping Cough, 2 from Measles, and 1 from Diarrhœa.

There were no deaths from Smallpox, Enteric Fever or Scarlet Fever.

The experience of this group is a striking illustration of the decline in the mortality from Acute Diseases. For instance, the death-rate from the group per million living in the decennium 1871-1880 was 3,049. In 1921-1930 the rate declined to 301 or one-tenth.

The group includes mortalities that at the moment have disappeared, such as that from Smallpox, mortalities that have practically disappeared, such as those from Enteric Fever and Diarrhœa, and mortalities which still exact an appreciable toll, such as those from Diphtheria, Measles and Whooping Cough.

Scarlet Fever mortality scarcely exists at the present day, but Scarlet Fever is a treacherous disease.

SMALLPOX.

There were no deaths from Smallpox in 1933. The last fatal Smallpox case in Ipswich occurred exactly 40 years ago.

ENTERIC FEVER.

There were no deaths from Enteric Fever in Ipswich in 1933 as there were no cases.

The old endemic type of the disease has disappeared because the conditions upon which its prevalence depended exist no longer.

SCARLET FEVER.

There were no deaths from Scarlet Fever in 1933.

Periods	Males.		Females.		Persons.	
	No.	Rate	No.	Rate.	No.	Rate.
1841—1850	53	.38	67	.43	120	41
1851—1860	56	.33	64	.34	120	.33
1861—1870	153	79	151	.70	304	75
1871—1880	101	46	99	.39	200	.42
1881—1890	18	.07	20	.06	38	07
1891—1900	21	07	31	.09	52	08
1901—1910	4	.01	11	.02	15	.02
1911—1920	26	.07	18	.04	44	05
1921—1930	3	.007	6	.01	9	01
1841—1845	16	.25	20	27	36	.26
1846—1850	37	.51	47	57	84	.54
1851—1855	27	.33	39	43	66	.38
1856—1860	29	.33	25	25	54	.29
1861—1865	115	1.26	118	1 13	233	1.19
1866—1870	38	.39	33	.29	71	.34
1871—1875	59	.56	43	.36	102	45
1876—1880	42	.36	56	43	98	.40
1881—1885	16	.13	20	14	36	.13
1886—1890	2	.01	—	–	2	.00
1891—1895	19	.13	18	11	37	.12
1896—1900	2	.01	13	.07	15	04
1901—1905	1	.00	5	02	6	.01
1906—1910	3	01	6	03	9	02
1911—1915	23	12	15	07	38	.10
1916—1920	3	01	3	01	6	01
1921—1925	1	.00	5	02	6	01
1926—1930	2	01	1	00	3	00
1931	—	—	3	06	3	.03
1932		—	1	02	1	01
1933	—		—			—

So far as fatalities are concerned, the position to-day is very much the same as in 1886-1890.

I have referred to the treacherous behaviour of Scarlet Fever and drawn attention to the warning, writ large in the Table, against the acceptance of the present state of affairs as any indication of the establishment of a permanent type.

DIPHTHERIA.

Diphtheria was responsible for 7 deaths in 1933, as compared with 12 in 1932 and 24 in 1931.

Periods.	Males.		Females.		Persons.	
	No.	Rate.	No.	Rate.	No.	Rate.
1841—1850	19	.13	16	.10	35	.12
1851—1860	23	.13	27	14	50	.14
1861—1870	43	.22	57	26	100	.24
1871—1880	56	.25	53	.21	109	23
1881—1890	77	30	91	31	168	31
1891—1900	72	.24	85	25	157	.25
1901—1910	57	.17	45	12	102	.14
1911—1920	69	.19	58	14	127	16
1921—1930	27	06	25	05	52	.06
1841—1845	7	.10	7	09	14	.10
1846—1850	12	.16	9	10	21	.13
1851—1855	7	08	5	05	12	.07
1856—1860	16	.18	22	22	38	20
1861—1865	24	26	48	.46	72	.36
1866—1870	19	19	9	.08	28	.13
1871—1875	15	.14	17	.14	32	14
1876—1880	41	.35	36	27	77	.31
1881—1885	20	.16	27	19	47	17
1886—1890	57	43	64	43	121	.43
1891—1895	51	36	52	.32	103	.34
1896—1900	21	14	33	19	54	16
1901—1905	30	.18	28	15	58	.16
1906—1910	27	15	17	09	44	12
1911—1915	35	.19	24	12	59	15
1916—1920	34	18	34	16	68	17
1921—1925	9	.04	16	07	25	.06
1926—1930	18	.08	9	.04	27	06
1926	3	07	—	—	3	03
1927	1	02	—	—	1	.01
1928	3	.07	1	02	4	04
1929	6	.14	5	11	11	12
1930	5	.12	3	06	8	.09
1931	13	.31	11	23	24	27
1932	7	.16	5	.10	12	13
1933	2	.04	5	10	7	.07

Thus, in 1933 the mortality returned to about the average of the period 1921-1930.

Reference has been made in these Reports repeatedly to the change in the type of Diphtheria in 1928.

The maximum severity of the infection was recorded in 1931, and at the present moment there are so few cases that it may be hoped that the community has acquired a reasonable degree of immunity against this particular strain.

WHOOPING COUGH.

Three deaths were referred to Whooping Cough.

Periods	Males		Females.		Persons.	
	No.	Rates.	No.	Rates.	No.	Rates.
1841 1850	76	55	89	.57	165	.56
1851 1860	66	39	98	.52	164	.46
1861—1870	82	.42	97	.45	179	.44
1871—1880	126	57	139	.56	265	.56
1881—1890	110	.43	138	.47	248	.45
1891—1900	98	.34	102	.30	200	.32
1901—1910	75	.22	92	.24	167	.23
1911 - 1920	64	17	73	18	137	.17
1921—1930	33	08	39	08	72	08
1841—1845	30	47	31	43	61	45
1846 1850	46	63	58	.70	104	67
1851—1855	26	.32	53	.58	79	.46
1856—1860	40	46	45	46	85	46
1861—1865	33	.36	37	.35	70	35
1866—1870	49	50	60	54	109	.52
1871—1875	60	.57	60	50	120	.53
1876—1880	66	57	79	61	145	59
1881—1885	44	35	76	54	120	.45
1886—1890	66	50	62	41	128	.45
1891—1895	52	37	50	31	102	34
1896—1900	46	30	52	30	98	30
1901—1905	45	28	45	24	90	26
1906 1910	30	17	47	24	77	21
1911 1915	39	21	43	21	82	21
1916 1920	25	13	30	14	55	14
1921 1925	17	09	21	09	38	09
1926 1930	16	07	18	08	34	08
1931			7	15	7	07
1932	2	04			2	02
1933	2	04	1	02	3	03

Thus, the low mortality rates continue for this disease.

MEASLES.

Periods.	Males.		Females.		Persons.	
	No.	Rates.	No.	Rates.	No.	Rates.
1841—1850	52	.38	35	.22	87	.30
1851—1860	39	.23	32	.17	71	20
1861—1870	38	.19	36	.16	74	.18
1871—1880	43	.19	36	.14	79	16
1881—1890	103	.40	93	.32	196	.36
1891—1900	102	.35	79	.22	181	.29
1901—1910	103	.31	90	24	193	27
1911—1920	70	.19	52	12	122	.15
1921—1930	26	.06	21	04	47	05
1841—1845	29	.45	12	16	41	.30
1846—1850	23	.31	23	.28	46	.29
1851—1855	21	.26	15	16	36	.21
1856—1860	18	.21	17	.17	35	.19
1861—1865	27	.29	26	.24	53	.27
1866—1870	11	.11	10	.09	21	.10
1871—1875	15	.14	12	10	27	.12
1876—1880	28	.24	24	18	52	.21
1881—1885	27	.22	27	.19	54	.20
1886—1890	76	.58	66	.44	142	.50
1891—1895	30	.21	34	.21	64	.21
1896—1900	72	.48	45	.26	117	.36
1901—1905	49	.30	40	.22	89	.26
1906—1910	54	.31	50	.26	104	.28
1911—1915	45	.25	37	.18	82	21
1916—1920	25	.13	15	07	40	10
1921—1925	10	.05	12	05	22	.05
1926—1930	16	.07	9	.04	25	06
1926	—	—	—	—	—	—
1927	—	—	—	—	—	—
1928	8	.19	3	.06	11	.12
1929	—	—	—	—	—	—
1930	8	.19	6	.13	14	.16
1931	1	.02	2	.04	3	.03
1932	3	.07	—	—	3	.03
1933	1	02	1	02	2	02

The present type of Measles is mild, but the Table definitely forbids the drawing of conclusions from the fact.

ZYMOTIC DIARRHŒA.

This term is applied to the deaths from Diarrhœa of persons under 2 years of age. The disease is not confined to children of this age, but, for practical purposes, it is fatal only to infants and children under 2 years of age.

The disease has been given many names, two of which are of special significance, Epidemic Diarrhœa and Summer Diarrhœa. These indicate the two chief characteristics of the disease, viz., its occurrence in epidemics in the summer months.

The epidemic months in Ipswich were August and September. The month of July heralded the epidemic with a more or less steep rise in its prevalence, and the month of October saw its decline and disappearance.

The disease was therefore associated, in its epidemic form, with the hot months of the year, and experience showed that the hotter the weather the greater the severity of the epidemic.

Temperature was not the only factor. The degree of dryness of the summer was considered to exert a great influence in the promotion of the epidemic state. It is difficult to separate the influence of temperature from that of dryness, as the two go hand in hand.

Writers on diarrhœa epidemics in the last century and the beginning of this referred constantly to the influence of long hot rainless summers in the promotion of Diarrhœa prevalence and stress the point that cool wet summers had little Diarrhœa.

From this association sprang the view that these Diarrhœa epidemics were due to climatic conditions mainly, if not entirely, the environmental circumstances and mode of life of the people being excluded from active participation in the causation of the epidemic state.

DEATH-RATES FROM DIARRHŒA, UNDER 2 YEARS.

DECENNIAL AND QUINQUENNIAL.

	Per 1,000 living.			Per 1,000 Births.		
	M	F	P	M	F	P
1841—1850	1.09	.73	.90	31.15	24.52	27.90
1851—1860	1.11	.98	1.04	30.22	31.86	31.03
1861—1870	.83	.69	.76	23.36	22.96	23.17
1871—1880	1.28	.95	1.10	34.97	31.03	33.05
1881—1890	.68	.53	.60	19.95	18.03	19.00
1891—1900	1.31	1.01	1.14	41.95	38.26	40.14
1901—1910	.62	.41	.53	21.59	18.12	19.89
1911—1920	.32	.21	.26	13.75	10.51	12.21
1921—1930	.09	.05	.07	5.13	3.51	4.33
1841—1845	.51	.37	.44	16.20	13.13	14.66
1846—1850	1.59	1.05	1.30	42.22	33.69	38.12
1851—1855	1.21	1.05	1.12	33.28	33.17	33.23
1856—1860	1.02	.93	.97	27.41	30.61	28.96
1861—1865	.99	.83	.90	27.20	27.67	27.43
1866—1870	.71	.55	.63	19.73	18.54	19.15
1871—1875	1.28	.93	1.09	35.08	30.44	32.81
1876—1880	1.28	.96	1.11	34.88	31.56	33.27
1881—1885	.69	.58	.63	20.00	19.14	19.55
1886—1890	.66	.48	.57	20.00	16.92	18.45
1891—1895	1.01	.75	.88	31.72	28.11	29.94
1896—1900	1.59	1.24	1.40	51.79	48.29	50.09
1901—1905	.74	.53	.63	24.49	20.34	22.45
1906—1910	.51	.37	.43	18.56	15.80	17.21
1911—1915	.48	.36	.42	19.41	16.85	18.16
1916—1920	.15	.06	.11	7.33	3.65	5.52
1921—1925	.14	.07	.10	7.05	3.83	5.44
1926—1930	.06	.05	.05	3.18	3.13	3.15
1931	.07	.04	.05	4.27	3.00	3.64
1932	—	.02	.01	—	1.44	.73
1933	.02	—	.01	1.51	—	.78

Thus, it is seen that there was no sign of improvement in the Diarrhœa death-rate up to the end of the 19th century. Indeed, the highest Diarrhœa death-rate in the whole period under review was recorded in the last five years of the century.

During this period there were four epidemics with over 100 deaths each, 14 with over 50, 9 with over 40, 8 with over 30, and 10 with over 20.

In other words, there was epidemic prevalence of definite severity in 45 years out of the 60 concerned. This will suffice to give some idea of the magnitude of the evil.

The experience of the present century can be divided into two distinct periods.

The first period extended from 1901 to 1915 inclusive.

In this period there were 4 epidemics with over 50 deaths each, 3 with over 30, and 4 with over 20.

There was, therefore, a very considerable amount of Diarrhœa during the whole of this time, though less than in the previous century.

Particularly hot dry years were 1901, 1904, 1906 and 1911. In each of these there was a severe epidemic. 1911 was, in fact, the last great Diarrhœa year in Ipswich. The Diarrhœa-rate in that year was equal to 0.930 per 1,000 living or 38.939 per 1,000 births.

The second period extends from 1916 to the present day.

In this period Diarrhœa has definitely disappeared from the list of dangerous epidemic diseases.

The worst year in this series was 1921, a hot rainless summer with 22 deaths from diarrhœa equal to a death-rate of 0.277 per 1,000 living or 12.761 per 1,000 births.

Throughout the rest of the period the annual number of deaths was relatively insignificant, and in the last three years there have been six deaths from this disease.

In the year 1933, with one of the longest summers on record, with high temperatures and a rainfall for the year of about eight inches below the average, there was only one fatal case of Diarrhœa.

From this it is an easy step to the conclusion that climatic conditions are not in themselves the real cause of epidemics of Summer Diarrhœa, but exert their influence through other conditions affording favourable breeding grounds for the germs responsible for the epidemics

Amongst the conditions favourable to Diarrhœa prevalence we place insanitary conditions of all sorts in the immediate vicinity of the homes of the people as easily first.

This point of view has been emphasised repeatedly in these Reports with special reference to the influence of Privy Middens. In my opinion, these structures were the great source of the infection responsible for the Diarrhœa epidemics of the last century and the beginning of this. Situated as they were in the immediate vicinity of the backs of houses, they were not only foul in the extreme in themselves, but provided a constant source of pollution of the surrounding soil.

The result of this was that when the Privies themselves disappeared, the backyards remained grossly polluted, providing an entirely suitable soil for the growth of the germs concerned.

The only remedy for this was concreting of backyards. This, in the great majority of cases, was not done until years after the removal of the Privies. In consequence, the full effects of the abolition of the Privies so far as Diarrhœa was concerned, was not experienced for many years after.

The Privy system was the outer and visible sign of a population devoid of a sanitary conscience. In consequence, gross pollution of house surroundings took place in many other ways, such as the careless disposal of house refuse, slop waters, and the keeping of animals in backyards. They contributed their quotas to the pollution of the soil and the consequential promotion and maintenance of diarrhœal conditions.

Inside the houses, dirty conditions of life generally, dirty food cupboards, and dirty food itself, all played their part. Conditions such as these inside and outside provided ideal opportunities for the breeding of flies, which flew straight from the festering Privy to the butter dish or milk can, etc., transporting infection with unrestricted freedom. These conditions have improved very greatly, especially of recent years, but bad arrangements for the storage and protection of food still exist in the older houses of the town as a definite menace to the health of their inhabitants.

Our enquiry has, I think, established with a high degree of probability the substantial accuracy of the view that climatological conditions alone are incapable of giving rise to epidemic diarrhœa in the absence of conditions of insanitation. We have shown that these existed in Ipswich up to well into the first fifteen years of this century. The campaign substituting a water carriage system throughout the town in place of the old Privy system did not begin until about 1895, and it did not come to an end until about 1906, and we have seen that the necessary soil pollution associated with the Privy system persisted for years after though in steadily diminishing degree.

This view does not rule out the influence of the personal factors of management of the home and of the infant population. In every Diarrhœa year infants fed on the breast, as all infants should be, enjoyed a high degree of freedom from the pestilence, which was almost entirely confined to artificially-fed infants and older infants past the weaning stage of life.

This focusses attention on the part played by the mother, and brings into position her responsibility. In some quarters the view is held that the disappearance of Diarrhœa as a fatal infant disease is due to the educational campaign of the Child Welfare Centres, the influence of insanitary conditions being relegated to a second place. I dissent entirely from this view after a prolonged experience of both insanitation and intensive Infant Welfare work.

The latter occupies rightly a foremost place in every well-ordered municipal service, but its value depends not only upon the active co-operation of the mothers in the city, but upon conditions of sanitation such as render it possible for the mothers to carry into practical effect the practice of cleanliness inside and outside the home, so as to ensure the presentation of food in a sound and cleanly state.

I emphasize that the foundations of the healthy living of city communities is cleanliness in all its forms, cleanliness of persons, of houses, of surroundings of houses, of the air we breathe, and the water we drink, aided by nature's great energiser and disinfector, the sun.

Add to this ceaseless Health Propaganda.

INFLUENZA.

Period	Males		Females.		Persons.	
	No.	Rates.	No.	Rates.	No.	Rates.
1841—1850	10	07	13	.08	23	07
1851—1860	3	.01	3	.01	6	.01
1861—1870	4	.02	1	.00	5	01
1871—1880	—	—	2	.00	2	00
1881—1890	1	.00	4	.01	5	.01
1891—1900	121	.41	143	.43	264	.42
1901—1910	80	23	83	.22	163	22
1911—1920	171	47	206	.50	377	49
1921—1930	101	.25	132	.30	233	.27
1891—1895	71	51	86	.53	157	.52
1896—1900	50	.34	57	.33	107	.33
1901—1905	32	.19	37	.20	69	20
1906—1910	48	28	46	.24	94	.26
1911—1915	39	22	38	.19	77	.23
1916—1920	132	61	168	.82	300	.77
1921—1925	40	.21	68	.31	108	.26
1926—1930	61	30	64	28	125	.29
1926	10	.25	9	.20	19	.22
1927	28	.70	30	67	58	.68
1928	5	.12	3	06	8	.09
1929	14	34	20	.44	34	.39
1930	4	09	2	.04	6	.06
1931	6	.14	5	.10	11	12
1932	9	.21	23	.49	32	.36
1933	15	.35	16	.34	31	.34

There was a considerable epidemic of Influenza in the early part of the year.

Of the total Influenza deaths for the whole year, 6 occurred in January and 21 in February. In this respect the 1933 outbreak corresponded exactly with the average experience of recent years.

Two of the deaths were under 5 years of age and 16 over 60.

DEATHS FROM TUBERCULOSIS.

59 deaths (35 males, 24 females) were referred to Tuberculosis in 1933, as compared with 75, 88, 67, 80 and 89 respectively in the five preceding years.

The number of deaths recorded in 1933 was by far the lowest since 1841.

46 of the deaths (26 males, 20 females) were ascribed to the Pulmonary variety of the disease, and 13 (9 males, 4 females) to all the other forms of Tuberculosis. The number of deaths referred to Pulmonary Tuberculosis was the lowest on record.

The annexed Table shows the death-rates per million living from Pulmonary Tuberculosis, All Other Forms of Tuberculosis, and All Forms of Tuberculosis since 1841-1850.

DEATH-RATES FROM TUBERCULOSIS PER MILLION LIVING.

IPSWICH.

Periods.	Pulmonary Tuberculosis.			Non-Pulmonary Tuberculosis.			All forms of Tuberculosis.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
1841—1850	3,529	3,610	3,572	360	357	359	3,890	3,968	3,931
1851—1860	2,725	3,088	2,918	551	420	481	3,276	3,508	3,400
1861—1870	2,819	2,857	2,839	570	344	449	3,390	3,201	3,289
1871—1880	2,739	2,423	2,571	476	496	486	3,215	2,919	3,058
1841—1880	2,909	2,921	2,915	496	411	451	3,405	3,333	3,367
1881—1890	2,167	1,970	2,062	630	608	618	2,797	2,578	2,680
1891—1900	1,984	1,526	1,740	450	430	439	2,435	1,956	2,179
1881—1900	2,070	1,733	1,890	534	512	522	2,604	2,246	2,413
1901—1910	1,728	1,215	1,456	397	363	379	2,125	1,579	1,836
1911—1920	1,332	1,069	1.193	367	282	322	1,700	1,352	1,516
1921—1930	986	703	837	186	157	168	1,173	860	1,008
1841—1845	3,873	4,019	3,950	94	152	125	3,968	4,172	4,076
1846—1850	3,228	3,252	3,241	593	537	563	3,822	3,790	3,805
1851—1855	3,105	3.296	3,207	638	420	522	3,744	3,717	3,729
1856—1860	2,368	2,894	2,649	469	420	443	2.837	3,315	3,092
1861—1865	2,520	3,071	2,814	517	297	399	3,037	3,359	3,214
1866—1870	3,101	2,655	2,863	620	388	496	3,721	3,044	3,359
1871—1875	2,808	2,607	2,701	469	538	498	3,277	3,146	3,207
1876—1880	2,676	2,253	2,452	482	456	469	3,159	2,710	2,921
1881—1885	2,359	2,143	2,244	644	640	642	3,004	2,783	2,887
1886—1890	1,986	1,808	1,891	616	578	595	2,602	2,386	2,487
1891—1895	2,131	1,701	1,901	439	351	392	2,571	2,052	2,294
1896—1900	1,848	1,363	1,590	460	503	483	2,308	1,866	2,073
1901—1905	1,779	1,335	1,543	349	331	339	2,128	1,667	1,883
1906—1910	1,679	1,100	1,373	442	394	417	2.121	1,495	1,790
1911—1915	1,468	981	1,212	357	246	299	1.825	1,227	1,511
1916—1920	1,199	1,155	1,175	377	318	346	1,577	1,473	1,522
1921—1925	1,085	779	923	183	154	167	1,268	933	1,091
1926—1930	892	631	754	189	160	173	1,082	791	928
1931	869	776	820	144	215	182	1,014	992	1,002
1932	788	661	721	95	149	124	884	811	845
1933	618	425	516	214	85	145	832	510	662

From this it appears that the death-rates at all ages from Pulmonary and All Forms of Tuberculosis dropped in 1933 to the lowest point ever recorded, both for males and females. The female rate is of special significance, since it may be regarded as a sure indication that the decline in the Tuberculosis death-rate can be expected to continue.

The Table shows that the death-rates from all varieties of Tuberculous Disease have declined very greatly in the period covered by it.

For comparative purposes the fairest comparison is to contrast the experience of the Decennium 1921-1930 with that of the period of 40 years 1841-1880. This reveals that the death-rate of males from All Forms of Tuberculosis has declined by about 66% and that of females by about 75%.

During the last few years the proportional decline has been still greater. Thus, if the quinquennial period 1926-1930 be compared with the same 40-year period, the proportions become 68% for males and 77% for females.

If the experience of the three years 1931-1933 be applied to the same basis of comparison, we find that the mortality from Tuberculosis at the present moment has declined almost 75% in the case of males, and 80% in that of females.

Thus the decline has been continuous.

The foregoing considerations apply to the Tuberculosis death-rates at all ages.

Examination of the Tuberculosis death-rates from infancy onwards shows that the decline in the rates at different age periods is not the same throughout life, but follows the same general course as that of the age distribution of the death-rates from all causes. It has been shown already that in that case the greatest declines are recorded at the youngest ages, and I give a Table showing that this is exactly the local experience in Tuberculosis.

AGE DISTRIBUTION OF THE DEATH-RATES FROM ALL FORMS OF TUBERCULOSIS PER LIVING MILLION.

Age Periods	1841 — 1880			1881 — 1900			1901 — 1910			1911 — 1920			1921 — 1930		
	M	F	P	M	F	P	M	F	P	M.	F	P	M	F	P
— 5	3.456	3.521	3.488	3.216	2.829	3.020	2.573	2.236	2.405	2.314	1.419	1.869	.726	.735	.731
—10	1.085	1.077	1.081	.910	1.089	1.006	.709	.895	.802	.387	.531	.458	.221	.329	.275
—15	1.037	1.561	1.300	.899	1.179	1.041	.489	.713	.604	.442	.617	.531	.221	.318	.270
—20	2.592	3.372	3.018	1.752	2.153	1.969	1.254	1.191	1.221	1.109	1.771	1.445	.689	.841	.769
—25	4.839	4.453	4.620	3.071	2.509	2.758	2.483	1.922	2.181	2.146	1.742	1.924	1.457	1.296	1.369
—30	5.414	4.908	5.136	3.202	2.825	2.996	2.545	1.600	2.032	2.226	1.723	1.959	1.267	1.230	1.247
—35	5.190	5.039	5.107	3.845	2.663	3.212	2.638	1.870	2.227	2.075	1.735	1.897	1.842	1.194	1.494
—40	5.304	5.549	5.434	4.081	2.985	3.497	2.867	2.111	2.464	2.137	1.649	1.878	1.644	.958	1.278
—45	5.380	4.278	4.780	3.718	3.296	3.492	3.069	1.538	2.256	2.208	1.797	1.990	1.966	1.015	1.464
—50	4.554	4.034	4.275	3.923	3.513	3.700	3.465	1.806	2.579	2.728	1.434	2.044	1.770	.983	1.362
—55	3.932	3.223	3.547	3.549	2.127	2.776	2.659	1.566	2.065	1.999	1.608	1.788	2.258	.729	1.452
—60	4.104	2.717	3.350	3.176	1.529	2.268	3.035	2.591	2.796	2.720	.978	1.660	1.514	.811	1.141
—65	2.737	1.815	2.225	2.653	2.171	2.442	2.538	1.792	2.118	1.444	1.290	1.358	1.371	.954	1.142
—70	2.735	1.840	2.245	2.906	2.397	2.620	3.111	1.254	2.043	2.404	1.226	1.737	1.147	1.271	1.215
+70	.831	.589	.690	1.423	.605	.948	2.258	1.350	1.722	.632	.453	.522	.352	.444	.408
All Ages	3.405	3.333	3.367	2.604	2.246	2.413	2.125	1.579	1.836	1.700	1.352	1.516	1.173	.860	1.008

It is seen that the lowest average death-rate from Tuberculosis occurs between 5 and 10 years of age, followed very closely by the 10-15 age period.

At the present moment the Tuberculosis death-rates under 5 years of age are similar to those between 15 and 20, but it is obvious that this is a purely recent development.

In general terms, if the experience of the decennium 1921-1930 be compared with that of the 40 years 1841-1880, there is an average decline of about 75% at each age period under 45 years of age (80% under 5 years of age and at 10-15), of about 65% between 45 and 60, and about 50% over 60 years of age.

Valuable light on the present position of the Tuberculosis death-rate is shed by consideration of some of the features of the Tuberculosis death-rate under 1 year of age :—

DEATHS FROM TUBERCULOSIS -1 AND DEATH-RATES -1.

	Number of Deaths under 1 year.				Death-Rates per 1,000 Births.
	Pulmonary.	Cerebral.	Abdominal.	All Forms.	
1841—1850	31	—	34	68	7.241
1851—1860	56	3	61	120	10.062
1861—1870	21	3	59	85	6.394
1871—1880	17	10	50	82	5.252
1881—1890	20	41	30	98	5.729
1891—1900	15	21	27	68	3.710
1901—1910	17	14	15	59	3.138
1911—1920	7	18	10	43	2.600
1921—1930	1	10	—	12	.800
1931—1933	—	3	—	4	.998

Average Rate 1841-1880 equals 7.068.

From this it appears that at this age period Tuberculosis has undergone some remarkable changes within the 90 years comprised in the Table.

It should be noted that the figures of the fourth column are larger than the total of the other three, as it includes forms of Tuberculosis other than Pulmonary, Cerebral and Abdominal.

In the first place the Table indicates a decline of about 89% if the rate recorded in 1921-1930 be compared with the average obtaining between 1841 and 1880.

This particular group is included in the whole number of T.B. deaths under 5 years of age, in which a decline of about 80% has been revealed. It appears, therefore, that the decline in the death-rate under 1 year is greater than in that of the group as a whole.

In the second place, there are some interesting questions raised by the distribution of the Tuberculous infection.

It will be evident that the Pulmonary variety of the disease has practically vanished as a cause of death, as there has been only one death since 1921.

On the other hand, the Cerebral type (practically Tuberculous Meningitis) although almost unrecognised up to 1870, reached its maximum between 1881 and 1890. It is now the only variety of Tuberculosis causing death under 1 year, with the exception of a few cases of General Tuberculosis. It is highly improbable that the number of deaths referred to Tuberculous Meningitis up to 1870 is a true indication of the facts, and there is room for considerable scepticism as to the genuineness of the early numbers of deaths from Pulmonary Tuberculosis. There was, in those times, definitely too little recognition of Tuberculous Meningitis, and probably too much of Pulmonary Tuberculosis amongst infants.

The case of Abdominal Tuberculosis is also open to question. It is difficult to reconcile the total disappearance of this variety during the last 13 years with the figures of the last century. Nevertheless, it is a fact that infant deaths from Abdominal Tuberculosis have not been replaced by anything else. The clinical condition suggesting Tuberculosis has practically vanished as a cause of death.

Finally, it is worthy of note that the Tuberculosis death-rate of Infancy has behaved, so far as decline is concerned, much in the same way as that at all ages, except that it has gone farther, especially during the last thirteen years.

Tuberculous Meningitis and General Tuberculosis prove that infants are still liable to acute Tuberculous infection.

The view has been expressed, repeatedly, in these Reports that the present position of the Tuberculosis death-rate points to the conclusion that it is due primarily to the evolution of a race, which is gradually becoming immune to the Tubercle Bacillus.

In the past, the folly and ignorance of the laws of life, shared alike by the man in the street and his medical brother, prevented any sufferer from active Tuberculosis from having a reasonable chance of recovery. Hence the death-rate. At the present time much of this has been removed, and the Tuberculous individual now enjoys opportunities of treatment and conditions of life unknown to his forbears. This change is beginning to tell its tale, and, with steadily improving conditions of life and more sensible modes of living, the properties of nature are being given chances hitherto denied them.

The laws of immunity, individual and hereditary, have now the opportunity of playing their part under reasonable conditions, and if there is any reality in the slum campaign, they will, in the future, have vastly greater opportunity.

In this relation, and too often forgotten, the spread of knowledge on how to feed the family is of the first importance. Food values and the art of cooking are branches of knowledge despised by the unthinking and incompetent housewife, yet they are of paramount importance in the building up of the conditions of nutrition required to preserve the health of the community. The capacity to resist disease depends upon hereditary qualities, the opportunities of acquiring herd immunity, and the individual nutritional condition. Tuberculosis and nutrition go hand in hand, but the individual with hereditary immunity, enhanced by a degree of acquired immunity, is much more able to withstand the onslaught of Tuberculosis under conditions of malnutrition, than the person who has no such protection.

In my opinion, infection with Tuberculosis is as common as ever, but in consequence of Herd Immunity, and improved living, it is becoming increasingly less fatal.

CANCER.

154 deaths (59 males and 95 females) were ascribed to Cancer in 1933, as compared with 155 in 1932, and 133 in 1931. With the exception of 1932, the figure for 1933 was the highest on record.

The number of male deaths was the highest recorded, with the exceptions of 1932 and 1930.

The number of female deaths was the highest recorded without exception.

The male Cancer death-rate in 1933 was 1.40 per 1,000 living. This has been surpassed on five occasions since 1841, viz., 1924, 1925, 1929, 1930 and 1932.

On the other hand, the female death-rate of 2.01 in 1933 was not only the highest rate ever recorded, but the first occasion on which a Cancer death-rate of more than 2 per 1,000 living has been registered. 17.8% of the deaths of females from all causes at all ages were due to Cancer. A very dreadful proportion.

The continual increases in the female Cancer death-rate indicate quite definitely further increases in the male Cancer death-rate in the future.

So far as the mortality of persons is concerned, the rate for 1933 was equalled by that of 1925, and surpassed by 1932 only.

The local figures give no indication at all that the increase in the mortality from Cancer is coming to an end. The evidence is all the other way.

Period.	Numbers and Crude Death-rates.					
	Males.		Females.		Persons.	
	No.	Rates.	No.	Rates.	No.	Rates.
1841—1850	12	.08	50	.32	62	.21
1851—1860	21	12	80	.42	101	.28
1861—1870	47	.24	143	.66	190	.47
1871—1880	96	.43	193	.77	289	.61
1881—1890	115	.45	243	.84	358	.66
1891—1900	182	.62	299	.90	481	.77
1901—1910	290	.87	413	1.11	703	.99
1911—1920	399	1.10	562	1.39	961	1.25
1921—1930	523	1.33	694	1.57	1217	1.46
1841—1845	4	.06	24	.33	28	.20
1846—1850	8	.11	26	.31	34	.22
1851—1855	12	.15	43	.47	55	.32
1856—1860	9	.10	37	.38	46	.25
1861—1865	12	.13	77	.74	89	.45
1866—1870	35	,36	66	.59	101	.48
1871—1875	48	.46	103	.86	151	.67
1876—1880	48	.42	90	,69	138	.56
1881—1885	50	.41	117	.84	167	.63
1886—1890	65	.50	126	.84	191	.68
1891—1895	74	.53	145	.90	219	.73
1896—1900	108	.72	154	.90	262	.81
1901—1905	117	.73	164	.90	281	.82
1906—1910	173	1.01	249	1.31	422	1.17
1911—1915	196	1.09	274	1.38	470	1.24
1916—1920	203	1.11	288	1.40	491	1.26
1921—1925	256	1.33	329	1.53	585	1.44
1926—1930	267	1.32	365	1.62	632	1.48
1926	44	1.10	61	1.38	105	1.24
1927	50	1.23	66	1.45	116	1.34
1928	49	1.21	80	1.75	129	1.50
1929	57	1.41	79	1.73	136	1.58
1930	67	1.63	79	1.72	146	1.68
1931	47	1.13	86	1.85	133	1,51
1932	67	1.60	88	1.89	155	1.76
1933	59	1.40	95	2.01	154	1.72

One of the most striking features of the Cancer statistics of the present day is the increase of the Cancer death-rate of persons over 70 years of age. During the three years 1931-1933, the Cancer deaths over 70 years of age accounted for over 41% of the total deaths from Cancer at all ages, and the approximate death-rate rose from 12.01 to 14.04 per 1,000 living over 70 years.

In my opinion this is due to postponement of death by various forms of treatment rather than to increase in the incidence of Cancer at these high ages.

SITE DISTRIBUTION OF THE CANCER DEATHS IN 1933.

This is best shown in a short Table of the principal sites :—

Organs affected.	Males.	Females.	Persons.
Intestines	14	13	27
Stomach	6	13	19
Uterus	—	19	19
Breast	—	18	18
Rectum	9	9	18
Liver	3	5	8

Thus Cancer selects the Digestive Systems of men and women, and the Reproductive System of women.

These figures are not quite in accordance with the average experience; as a rule the greatest number of male Cancer deaths are referred to the Stomach.

There are many peculiar features about the sex distribution of the sites of Cancers.

Thus the average local death-rates from Cancers of the mouth and the tongue are six times higher in males than females.

Cancer of the Oesophagus is nearly five times more frequent amongst men than women.

In the case of the stomach there are about three male deaths to every two females.

The female death-rate from Cancer of the Intestines is about 68% in excess of the average for males.

The average male death-rate from Cancer of the Rectum is double that of the female.

The death-rate for males from Cancer of the Liver is about 58% below the female rate.

Thus so far as the Digestive System is concerned, the male death-rate exceeds the female in the case of the Mouth, the Tongue, Oesophagus, Stomach and Rectum.

The female death-rate exceeds the male only in the case of the Intestines and Liver, and, as the great majority of Cancers of the Liver are secondary to growths elsewhere, there is very little in this.

Cancers of the Digestive System are predominently male.

Cancers of the Reproductive System are pre-eminently female.

It is not to be believed that facts such as these are matters of chance.

DEATHS FROM DISEASES OF THE RESPIRATORY SYSTEM.

The group includes Laryngitis, Bronchitis, Pneumonia, Pleurisy, Asthma, etc.

127 deaths (63 males, 64 females) were referred to the group in 1933, as compared with 155, 151, 86, 156 and 156 respectively in the five preceding years.

64 deaths (31 males, 33 females) were referred to Bronchitis, 55 (28 males, 27 females) to Pneumonia, and 8 (4 males, 4 females) to all other forms of Respiratory Disease.

Bronchitis thus accounted for one half of all the Respiratory Deaths, and Pneumonia for over 43%.

Respiratory Diseases accounted for 12.4% of the deaths from all causes, a proportion considerably below the average.

The deaths were most numerous in February (22), January (19), December (18), and March (13), and fewest in August (3), and July (4).

20 deaths were registered under 5 years of age, and 67 over 70.

Periods.	Diseases of the Respiratory System.						
	Deaths.			Death-Rates.			Male deaths per 1,000 Female deaths.
	M.	F.	P.	M.	F.	P.	
1841—1850	502	471	973	3.68	3.06	3.35	1,065
1851—1860	636	558	1194	3.84	2.96	3.37	1,139
1861—1870	704	657	1361	3.67	3.05	3.37	1,071
1871—1880	832	754	1586	3.81	3.03	3.39	1,103
1881—1890	924	802	1726	3.65	2.78	3.19	1,152
1891—1900	1063	918	1981	3.67	2.77	3.18	1,158
1901—1910	788	795	1583	2.38	2.13	2.24	991
1911—1920	852	820	1672	2.34	2.03	2.18	1,040
1921—1930	718	774	1492	1.83	1.75	1.79	927
1841—1845	202	161	363	3.17	2.23	2.67	1,254
1846—1850	300	310	610	4.13	3.78	3.95	967
1851—1855	320	284	604	4.00	3.14	3.54	1,126
1856—1860	316	274	590	3.70	2.81	3.22	1,153
1861—1865	353	339	692	3.88	3.25	3.54	1,041
1866—1870	351	318	669	3.62	2.87	3.22	1,103
1871—1875	384	346	730	3.67	2.90	3.27	1,109
1876—1880	448	408	856	3.92	3.15	3.51	1,098
1881—1885	453	406	859	3.69	2.91	3.28	1,115
1886—1890	471	396	867	3.62	2.66	3.10	1,189
1891—1895	591	494	1085	4.25	3.06	3.63	1,196
1896—1900	472	424	896	3.14	2.48	2.78	1,113
1901—1905	378	402	780	2.35	2.21	2.28	940
1906—1910	410	393	803	2.41	2.06	2.23	1,043
1911—1915	465	381	846	2.59	1.91	2.23	1,220
1916—1920	387	439	826	2.11	2.14	2.13	881
1921—1925	347	392	739	1.81	1.82	1.81	885
1926—1930	371	382	753	1.84	1.69	1.76	971
1931	70	81	151	1.69	1.74	1.72	864
1932	60	95	155	1.43	2.02	1.74	631
1933	63	64	127	1.49	1.36	1.42	984

Thus the Respiratory death-rate for 1933 was one of the lowest on record. This was to be expected on account of the favourable climatic conditions of the whole year.

In my Report for 1932, Respiratory Diseases were discussed in some detail, so that in this Report it is only necessary to re-emphasise the relationship between Slum conditions of life and Pneumonia and Bronchitis.

DEATHS FROM DISEASES OF THE HEART.

229 deaths (107 males, 122 females), were ascribed to diseases of the Heart in 1933, as compared with 194 in 1932, and 199 in 1931.

The death-rate from diseases of the Heart alone thus rose to 2.57 per 1,000 living, which is much the highest rate yet recorded for this particular group.

The increase in the number of deaths referred to diseases of the Heart was discussed at some length in last year's Report, and it was shown that the increase is a matter of classification arising from changes in Death Certification, largely at the expense of the indefinite group formerly included under the heading of Senility.

The change has not taken place in the group including conditions such as Aortic and Mitral Disease, but in that comprising the degenerations of the Heart Muscle accompanying the degenerative changes of advancing years.

Thus in 1933 there were 147 deaths referred to the group of Myocardial Degenerations, of whom only 8 were under 60 years of age. On the other hand, 107 were over 70 years of age. Thus very nearly one half of all the deaths referred to Heart Diseases was classified as due to some form of Myocardial Degeneration in persons over 70 years of age.

Period	No. of Deaths	Death Rates.
1901—1905	357	1.04
1906—1910	400	1.11
1911—1915	496	1.30
1916—1920	474	1.22
1921—1925	459	1.12
1926—1930	618	1.44
1931—1933	622	2.33

I refer once again to the definite relationship between Aortic Disease and Syphilis, and to the equally definite and much more widely recognised association of Mitral Disease with the Rheumatic constitution.

ANGINA PECTORIS.

Of recent years there has been an increasing tendency to ascribe deaths to this form of Heart Disease, particularly as a result of routine Post Mortem examinations in case of sudden death. In many of these cases the death has been ascribed to some form of disease of the Coronary Arteries. Thus, in this instance also, the increase is a tribute to greater accuracy of diagnosis, rather than evidence of any increase in this particular variety of cardiac affection.

The Table explains itself :—

Periods.	Deaths from Angina Pectoris.		
	Males.	Females.	Persons.
1911—1920	16	8	24
1921—1930	32	14	46
1931—1933	32	15	47

The Male excess is very striking.

The age distribution places the disease amongst those over 50, with particular emphasis on those between 60 and 80.

ARTERIO-SCLEROSIS.

34 deaths were referred to this group in 1933, as compared with 60 in 1932 and 20 in 1931.

Periods.	Arterio-Sclerosis.				Total.	
	With a Cerebral Lesion		Without a Cerebral Lesion			
	Numbers.	Rates.	Numbers.	Rates.	Numbers.	Rates.
1921—1930	96	.11	76	.09	172	.20
1921—1925	22	.05	29	07	51	.12
1926—1930	74	.17	47	11	121	28
1931	15	.17	5	05	20	.22
1932	42	47	18	20	60	67
1933	29	.32	5	05	34	.38

15 of the deaths were associated with Cerebral Hæmorrhage and 14 with other Cerebral Vascular lesions.

In this case also the group is intimately related to changes in death certification.

All the deaths were of persons over 60 years of age.

The group belongs to the degenerations associated with advancing age.

VIOLENCE.

The Death-rates from Violence (including Suicide) are set forth in the Table :—

Periods.	Death-rates per 1,000 living.		
	Males.	Females.	Persons.
1841—1850	.89	.25	55
1851—1860	.88	38	61
1861—1870	.89	26	56
1871—1880	.77	.20	.47
1881—1890	.75	23	47
1891—1900	.78	.29	.52
1901—1910	73	29	.50
1911—1920	74	.36	54
1921—1930	62	.29	.45
1921—1925	59	.27	.42
1926—1930	.66	.32	.48
1931	.77	.23	.49
1932	.86	27	.55
1933	.71	.40	.55

49 deaths (30 males and 19 females) were ascribed to Violence, as compared with 49 in 1932, 43 in 1931, and an annual average of 41 for the period 1926-1930.

13 of the deaths (7 males and 6 females) were due to Suicide, as compared with 14 in 1932 and 11 in 1931. At the present moment the death-rates from Suicide stand at a far higher level than at any previous period in the recorded history of the Borough. Suicide is quite definitely on the increase, especially among females. A sinister fact which has already been referred to in these Reports. 5 Suicides (3 males, 2 females) were due to Drowning, and 3 to Coal Gas (1 male, 2 females).

There were 3 deaths from Burns, all females. This form of accident is diminishing, in all probability on account of the disappearance of the old paraffin lamps, the substitution of gas cookers for the open range, the almost universal provision of fire guards where there are children, and the use of electric lighting.

5 deaths, all males, were due to Drowning. This was about the average.

6 deaths (2 males, 4 females) were ascribed to Falls. This was below the average.

14 deaths (10 males, 4 females) were referred to Vehicular Violence. Of these 7 were caused by Motor Cars, 4 by Motor Cycles, and 1 each Railways, Pedal Cycles and Aeroplanes. Of the 7 deaths due to Motor Cars, 3 were caused by Private Cars, 3 by Lorries, and 1 by a Motor Bus.

Of the 8 deaths due to all other forms of Violence, 2 were due to Machinery, 1 to Murder, and 1 to Manslaughter.

PUERPERAL MORTALITY.

5 deaths were associated with Pregnancy and Childbirth in 1933, the equivalent of a death-rate of 3.92 per 1,000 births.

2 of the deaths were ascribed to Puerperal Sepsis, 1 to Eclampsia, 1 to Ante-Partum Hæmorrhage, and 1 to Contracted Pelvis.

The facts with regard to the Maternal death-rates are shown as follows :—

Periods.	Puerperal Fever.	Puerperal Hæmorrhage.	Puerperal Convulsions	All other Conditions.	Total all causes.	
					No.	Rates.
1841—1850	1.81	.42	.53	1.71	42	4.47
1851—1860	1.00	.17	1.00	1.60	45	3.77
1861—1870	.90	.45	52	1.51	45	3.38
1871—1880	1.53	.57	.25	1.72	64	4.09
1881—1890	2.16	.52	.41	1.41	77	4.50
1891—1900	1.57	.50	.22	1.92	75	4.21
1901—1910	.63	1.07	.63	1.44	70	3.72
1911—1920	1.39	.60	.97	1.33	71	4.29
1921—1930	2.20	53	.66	.66	61	4.06
1921	1.74	—	—	1.74	6	3.46
1922	.63	—	1.89	.63	5	3.15
1923	1.29	—	—	.64	3	1.93
1924	1.39	—	.69	.69	4	2.79
1925	2.81	.70	—	—	5	3.52
1926	1.94	.65	1.94	1.30	9	5.84
1927	2.11	1.41	.71	.71	7	4.94
1928	4.91	2.81	.70	—	12	8.42
1929	2.08	—	.69	—	4	2.77
1930	3.40	—	—	.68	6	4.08
1931	1.45	—	—	.73	3	2.18
1932	—	.73	.73	2.20	5	3.66
1933	1.56	78	.78	78	5	3.92

The experience of 1933 was therefore very close to the average.

The following Table shows the number of notifications of cases of Puerperal Sepsis and the number of deaths therefrom since notification came into force :—

Periods.	No. of Cases Notified.	No. of Deaths.	Case Mortality per cent.
1891—1900	39	28	71.8
1901—1910	26	12	46.1
1911—1920	54	23	42.6
1921—1930	135	33	24.4
1931	18	2	11.1
1932	9	—	—
1933	24	2	8.3

This Table is, of course, quite wrong. The case mortality per cent. from Puerperal Sepsis was never as high as 71.8%.

The principal information supplied by this Table is that notification is now being made use of, because ample facilities exist for the treatment of cases in Hospital. Such cases as these cannot be dealt with properly at home, since they require very special treatment and nursing.

INFANT MORTALITY.

The Table gives the number of Infant Deaths and the Infant Mortality rates since 1841.

DECENNIAL AND QUINQUENNIAL INFANT DEATHS.

Period	No. of Deaths.			Infant Death Rates.						Female Infant Deaths per 1,000 Males.
	Males.	Fmls.	Infants	Males.		Females.		Infants.		Ipswich.
				Ips.	E.&W.	Ips.	E.&W.	Ips.	E.&W.	
1841—1850	913	743	1,656	190	167	161	137	176	153	812
1851—1860	1,122	931	2,053	184	168	159	139	172	154	829
1861—1870	1,141	982	2,123	167	168	151	139	159	154	861
1871—1880	1,369	1,024	2,393	171	163	134	134	152	149	748
1881—1890	1,327	1,004	2,331	153	155	118	128	136	142	756
1891—1900	1,582	1,181	2,763	174	168	135	138	155	153	746
1901—1910	1,322	1,044	2,366	138	140	113	114	126	128	789
1911—1920	889	615	1,504	105	112	76	89	91	100	691
1921—1930	496	343	839	65	81	46	63	56	72	691
1841—1845	361	296	657	176	162	143	133	160	148	815
1846—1850	552	447	999	201	172	175	142	188	157	809
1851—1855	550	453	1,003	188	172	158	141	173	156	823
1856—1860	572	478	1,050	180	166	160	137	171	152	835
1861—1865	567	492	1,059	171	166	156	136	164	151	867
1866—1870	574	490	1,064	164	170	146	142	155	157	855
1871—1875	647	487	1,134	169	167	133	138	152	153	752
1876—1880	722	537	1,259	172	159	135	130	154	145	744
1881—1885	647	496	1,143	152	152	117	125	134	139	766
1886—1890	680	508	1,188	155	159	119	131	138	145	747
1891—1895	763	559	1,322	171	165	128	135	150	151	732
1896—1900	819	622	1,441	177	170	141	141	160	156	759
1901—1905	763	605	1,368	155	151	128	124	142	138	792
1906—1910	559	439	998	119	129	97	105	109	117	785
1911—1915	525	365	890	115	121	85	97	101	110	695
1916—1920	364	250	614	92	101	65	79	78	90	686
1921—1925	274	197	471	71	86	50	66	61	76	718
1926—1930	222	146	368	58	77	41	59	50	68	657
1911	99	82	181	107	142	96	117	102	130	891
1912	120	75	195	135	106	87	84	112	95	625
1913	109	65	174	119	120	74	96	96	108	596
1914	101	87	188	108	116	100	93	104	105	861
1915	96	56	152	117	123	70	96	94	110	583
1916	78	57	135	90	102	71	80	81	91	730
1917	71	48	119	107	108	73	85	90	96	760
1918	66	49	115	94	108	71	86	83	97	742
1919	59	41	100	89	100	58	78	70	89	694
1920	90	55	145	89	90	55	69	72	80	611
1921	70	58	128	83	93	65	72	74	83	828
1922	38	47	85	49	87	58	66	54	77	1236
1923	52	27	79	66	78	35	60	51	69	519
1924	49	26	75	67	85	37	65	52	75	530
1925	65	39	104	93	84	54	66	73	75	600
1926	46	24	70	59	79	31	61	45	70	521
1927	51	41	92	69	79	59	60	65	70	803
1928	46	23	69	59	74	35	56	48	65	500
1929	44	32	76	60	83	44	65	52	74	727
1930	35	26	61	45	68	37	51	41	60	742
1931	46	36	82	65	75	53	57	59	66	782
1932	22	40	62	32	73	57	56	45	65	1818
1933	30	29	59	45		47		46	64	966

The number of Infant deaths in 1933 was the smallest recorded for any year since 1841.

The Mortality Rate was one of the lowest on record, but not so low as in 1930 (Rate 41), nor in 1926 and 1932 (Rates 45).

1932 and 1933 showed consecutive rates under 50 for the first time in the local experience.

On the average the Male Infant Mortality Rate exceeds the Female Rate considerably. In 1933 the sex rates were almost equal, with a small female excess.

It is impossible to examine this Table without satisfaction. It will be obvious that in the first 40 years (1841-1880) the local Infant Mortality considerably exceeded that of the country as a whole; whereas in the period 1881-1890 the Ipswich rate fell below it.

Between 1891 and 1910 the rates for the town and the whole country were practically equal.

Since 1910 the local Infant Mortality Rates have fallen far below those of the whole country.

It is not too much to claim that in average experience, the Ipswich Infant Mortality Rates, at the present time, are amongst the lowest of any of the industrial towns in the kingdom.

This complete change in position is not unrelated to the nature of the local Infant Welfare Campaign, which has proved itself to be peculiarly adapted to the special needs of the area.

I give the usual Table showing the age distribution and the causes of the Infant Deaths in 1933.

See Table facing this page.

Thus, the principal causes are seen to be Prematurity, Congenital Malformations, Respiratory Diseases and the Marasmus Group. These groups account for 46 of the 59 Infant Deaths from all causes.

Causes of Death.	1891—1895.	1896—1900.	1901—1905.	1906—1910.	1911—1915.	1916—1920.	1921—1925.	1926—1930.	1931.	1932.	1933.
7 Principal Zymotics ...	33.5	52.3	26.2	20.9	19 7	8.6	8.0	5.7	5 83	2.20	.78
Other Infectious Diseases...	4.4	2.4	1.7	4.2	4.2	3 6	2.4	1.5	2.18	1.46	1.56
Tuberculosis	3 8	3.8	3.0	3 3	2.3	2 9	.8	.8	.72	1.46	.78
Other General Diseases ...	.8	2	.5	.6	.6	.5	5	.5	.72	2 93	1.56
Diseases of Nervous System	12.3	10.6	10.2	7.8	5.8	4.9	3 5	1.5	2.18	—	.78
,, ,, Circulatory ,,	1	—	.1	—	.1	1		.1	—	—	—
,, ,, Respiratory ,,	26.1	24.1	22.2	16.0	18.4	15.3	11.5	8 7	12.40	11.73	7.84
,, ,, Digestive ,,	1.1	1.3	.2	1.7	2.2	2.3	1 2	.9	—	.73	.78
,, ,, Genito-Urinary System	.1	.2	.3	.3	.1	2		1	—	—	—
,, ,, Skin & Cellular Tissue	8	1.4	1.3	.4	.7	.2	.4	.1	—	.73	—
Congenital Malformations	2.8	1 7	2.6	3.1	4.7	4 0	4.6	5.4	6.56	8.07	9 41
Prematurity, Atrophy, etc.	61 5	56 8	68.6	46 8	40 3	33.0	26.1	23.4	27.71	14.67	21.19
Violence	1.5	2.9	3.0	2.1	1.9	2.7	1.9	.8	1.45	1.46	.78
All Others	1.5	2.1	7	1.2	6	3	—	.4	—	—	.78
TOTAL ...	150	160	142	109	101	78	61	50	59	45	46

INFANT MORTALITY TABLE, 1933.

	DAYS.																					WEEKS.												MONTHS.																																				TOTAL.		
	1			2			3			4			5			6			7			1			2			3			4			1			2			3			4			5			6			7			8			9			10			11			12					
	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P	M	F	P
Diarrhoea ...																																								1		1																													1	—	1
Influenza ...																																																				1		1										1		1				2	—	2
General Tuberculosis																																																								1	1														—	1	1
Septicaemia ...																																						1	1																																—	1	1
Cancer																																																																	1		1				1	—	1
Meningitis ...																																																																					1		1	1	—	1
Bronchitis ...																															1		1	1		1																																			1	—	1
Pneumonia ...																																								1	2	3					1	1											2	2				1	1	2	1		1	3	6	9
Diseases of Stomach																																																																	1		1				1	—	1
Congenital Malformations	1		1							2		2										3		3	3	2	5		1	1				6	3	9	1		1				1		1																1		1							9	3	12
Atrophy, Debility and Marasmus								1	1	1		1										1	1	2				2		2				3	1	4	1	2	3																1	1																4	4	8
Prematurity ...	3	8	11		1	1	1	1	2													4	10	14	1	1	2							5	11	16																																					5	11	16
Injury at Birth ...		1	1																				1	1											1	1																																					—	1	1
O.D. Early Infancy											1	1				1		1				1	1	2										1	1	2																																					1	1	2
Violence																													1	1					1	1																																					—	1	1
Ill defined ...																																											1		1																												1	—	1
	4	9	13	—	1	1	1	2	3	3	1	4	—	—	—	1	—	1	—	—	—	9	13	22	4	3	7	2	2	4	1	—	1	16	18	34	2	3	5	2	2	4	2	—	2	—	1	1	—	—	—	1	1	2	—	1	1	—	2	2	1	—	1	4	1	5	2	—	2	30	29	59
																																			20			23			43			2			1			3			1			4			5			7			1			8				

A

This Table shows very clearly the remarkable changes that have taken place in the death-rates from the various groups of diseases associated with Infant Mortality.

The group of the 7 Principal Zymotic Diseases was represented in 1933 by 1 death from Diarrhœa. The death-rate was the lowest ever recorded for this group.

The diminution in the number of Infant deaths referred to Syphilis is worthy of more than passing notice. I cannot refrain from the comment that not a little of the Infant Mortality ascribed to Congenital Syphilis in the past represents a phase of medical opinion from which we may hope we are emerging.

The case of Tuberculosis is referred to in the section dealing with Tuberculosis. Here also there has been a very great reduction, though nothing like that of the Acute Infectious Diseases.

The Respiratory Diseases (chiefly Pneumonia) also show considerable reduction.

On the other hand, an increase is evident in the case of Congenital Malformations. I wish once more to emphasise the point that there is no reason to believe there is any real increase in the actual number of infants suffering from Congenital Malformations. The position is one, simply, of greater accuracy in Death Certification.

The group of Prematurity, Atrophy, etc., heads the list of causes of Infant Death in 1933. It was responsible for nearly one-half of the total Infant Death-rate of the year.

The chief contributor was Prematurity.

This is the group of the true unfit, and they do not survive. We may say, indeed, that the Infant Mortality of the present day is made up largely (more than one-half if Congenital Malformations be included) of infants unfit to survive. With these should be linked up Stillbirths, particularly those in which death occurs before the commencement of labour.

The infants dying during labour are closely related to the live births which die during the first few days of life.

I think that far too little attention has been given to the influence of the act of birth itself, upon the prospects of survival of the infant, and it should be realised that its effects are shown not only in the heavy mortality of the first week of life, but in the later periods of the first year particularly in relation to the Nervous and Circulatory Systems.

The following comparative Table shows the age distribution of the Infant Death-rates under 1 year since 1891-1895 :—

AGE DISTRIBUTION OF THE INFANT DEATH-RATES UNDER 1 YEAR.

Periods.	—1 Week.			—1 Month			—3 Months.			3—6 Months.			6—9 Months.			9—12 Months.			—1 Year.		
	M.	F.	I.	M.	F.	I.	M.	F.	I.	M.	F.	I.	M.	F.	I.	M.	F.	I.	M.	F.	I.
1891—1900	27.60	20.50	**24.12**	47.36	35.39	**41.49**	84.45	63.92	**74.38**	37.86	28.64	**33.34**	28.48	24.40	**26.48**	23.84	18.32	**21.13**	174	135	**155**
1901—1910	30.46	22.68	**26.65**	51.11	39.07	**45.21**	79.49	61.55	**70.69**	23.88	19.75	**21.86**	19.92	15.95	**17.98**	14.60	16.06	**15.32**	138	113	**126**
1911—1920	26.07	19.87	**23.03**	41.25	31.35	**36.40**	62.35	45.79	**54.23**	15.52	11.11	**13.36**	15.17	10.44	**12.75**	12.32	8.16	**10.58**	105	76	**91**
1921—1930	24.46	15.54	**20.06**	33.88	23.52	**28.73**	46.69	30.96	**38.93**	7.23	5.27	**6.26**	5.65	5.00	**5.33**	5„52	5.28	**5.40**	65	46	**56**
1891—1895	29.47	21.06	**25.17**	50.00	35.72	**42.92**	88.43	61.07	**74.92**	35.32	27.19	**30.51**	26.32	20.28	**23.33**	21.60	20.28	**20.95**	171	128	**150**
1896—1900	25.80	20.04	**23.00**	44.88	35.08	**40.11**	80.66	66.74	**73.88**	40.33	30.06	**35.33**	30.57	28.47	**29.50**	26.01	16.40	**21.44**	177	141	**160**
1901—1905	30.20	27.54	**28.90**	54.49	45.56	**50.11**	85.31	70.56	**78.09**	30.20	22.03	**26.20**	23.06	17.37	**20.27**	17.14	18.22	**17.67**	155	128	**142**
1906—1910	30.72	17.58	**24.29**	47.57	32.27	**40.08**	73.39	52.08	**62.96**	17.28	17.36	**17.32**	16.64	14.46	**15.57**	11.94	13.80	**12.85**	119	97	**109**
1911—1915	30.12	22.00	**26.16**	45.52	33.48	**39.74**	69.40	48.00	**58.95**	16.29	13.81	**15.08**	18.07	12.17	**15.19**	13.39	11.47	**12.45**	117	85	**101**
1916—1920	21.49	17.48	**19.52**	36.41	28.97	**32.74**	54.36	43.33	**48.96**	14.66	8.09	**11.43**	11.88	8.09	**10.01**	11.12	5.74	**8.47**	92	65	**78**
1921—1925	25.33	17.25	**21.26**	35.24	25.75	**30.47**	52.22	34.00	**43.05**	7.05	5.92	**6.48**	6.01	5.40	**5.70**	6.26	5.40	**5.83**	71	50	**61**
1926—1930	23.58	13.66	**18.80**	34.18	21.06	**26.90**	41.08	27.61	**34.58**	7.42	4.54	**6.03**	5.30	4.54	**4.94**	5.03	4.83	**4.94**	58	41	**50**
1931	25.64	14.94	**20.42**	38.46	25.41	**32.09**	51.28	31.38	**41·57**	7.12	8.96	**8.02**	2.84	10.46	**6.56**	4.27	3.00	**3.64**	65	53	**59**
1932	11.92	14.45	**13.20**	17.88	27.45	**22.74**	25.33	39.01	**32·28**	2.98	1.44	**2.20**	2.98	11.56	**7.33**	1.49	5.78	**3.66**	32	57	**45**
1933	13.63	21.17	**17.26**	24.24	29.31	**26.68**	30.30	37.45	**33.75**	3.03	1.62	**2.35**	1.51	6.51	**3.92**	10.60	1.62	**6.27**	45	47	**46**

Comparing the sex mortalities at the different periods under 1 year, the female mortality was excessive at ages under 1 week, 1 month, 3 months and 6-9 months.

The male mortality was excessive at 9-12 months.

For both sexes the mortalities at all ages under 3 months corresponded closely with the average of the period 1926-1930. From 3-9 months they were below the same average, and from 9-12 above.

I call attention once again to the decline in the local Infant Mortality Rate under 3 months of age. In round figures the average experience of the present day is over 50% below that of the closing years of the 19th century. At ages over 3 months the decline is about 80%.

The decline is least under one week, although in this case there is a fall of 35%, as compared with the average of 1901-1910.

Under 1 month the fall is 41%.

Infant Mortality is a very complex business, influenced profoundly by many factors.

Thus, Legitimacy :—

Decennial Periods	Infant Death Rates	
	Legitimate	Illegitimate
1841—1850	163	390
1851—1860	163	298
1861—1870	147	336
1871—1880	144	306
1881—1890	130	238
1891—1900	148	266
1901—1910	121	208
1911—1920	86	159
1921—1930	54	85

Even at the present day, the illegitimate infant is at a definite and considerable disadvantage from the mere fact of illegitimacy. The governing factor is the mismanagement of the illegitimate infant, in not a few cases a matter of deliberate policy.

Again, multiple birth has a very great influence upon the prospect of survival.

Thus, in the period 1921-1930, Twin Infants born alive suffered a mortality experience of 264 per 1,000 live births, as compared with a mortality of 51 per 1,000 live births in the case of single infants, or in round figures, five times as much. This is the experience of the present day.

STILLBIRTHS.

I insert the usual Table about Stillbirths. There was an increase in 1933.

Year	Males		Females		Infants	
	No.	%	No.	%	No.	%
1927	18	4.5	9	2.6	27	3.6
1928	38	4.8	23	3.4	61	4.1
1929	40	5.3	29	3.9	69	4.6
1930	42	5.2	26	3.6	68	4.5
1931	27	3.7	23	3.3	50	3.5
1932	30	4.27	16	2.26	46	3.26
1933	26	3.79	25	3.91	51	3.84

The Ante-Natal (Stillbirths) and Infant Mortality Rates are shown in the Table, along with the Post-Natal Infant Mortality Rates.

Year	Death-rates of Infants (potential lives).								
	Males			Females			Infants		
	Ante-Natal	Post-Natal	Total	Ante-Natal	Post-Natal	Total	Ante-Natal	Post-Natal	Total
1928	48	59	106	34	35	68	41	48	89
1929	53	60	112	39	44	83	46	52	98
1930	52	45	96	36	37	73	45	41	85
1931	37	65	101	33	53	86	35	59	94
1932	42	32	74	22	57	79	32	45	76
1933	36	45	81	39	47	84	38	46	83

The Ante-Natal Rates are shown in terms of potential lives, the Post-Natal of live births and the combined of potential lives.

The inclusion of the Ante-Natal deaths just about doubles the Infant Mortality Rate.

THE MORTALITY EXPERIENCE OF THE NEW HOUSING ESTATES.

At the middle of 1932 the three new Municipal Housing Estates, Nacton, Gainsborough and London Road, contained 1,976 houses inhabited by about 9,320 people.

The Nacton Estate was begun in 1921 with 58 houses. These were added to year by year until the estate was built up in 1929. The total number of houses on this estate is 836, and the population at the

1931 Census was 4,250. It is estimated that no material change has taken place in the numbers on this estate since the Census, although the natural increase has been 124.

The London Road Estate (including Hadleigh Road) had some 24 houses in 1921. This number rose to 70 in the following year, and 74 in 1922, at which it remained until 1925, when the population displaced by the Black Horse Lane-Lady Lane slum demolition began to be moved over. This resulted in an increase in the number of houses from 74 in 1925 to 282 in 1932. This estate is now built up. Its population, based on the 1931 Census, is about 1,500 persons.

The Gainsborough Estate was begun in 1928 with 150 houses. In 1932 this number had increased to 858 with an estimated population based on the 1931 Census of 3,570 persons.

The acreage of the Nacton Estate is 99, and the House Density 8.29 per acre.

The Gainsborough Estate contains 112 acres, and the density at the moment is 7.66 to the acre, but the estate is not yet built up, so that the figure is fictitious.

The London Road area contains 18 acres, with a density of 11.85 houses per acre.

The age distribution of the populations of these Housing Estates at the 1931 Census showed that it was quite different from that of the town as a whole. This is due to the policy pursued by the Committee concerned, of giving preference to tenants with families. The result has been to produce populations much younger than that of the whole town. In the Nacton Estate, for example, the greatest number of persons was found at the 5-10 age period. The numbers declined rapidly until the 25-30 age period, but rose steeply between 30 and 40 years, and then declined equally quickly. There were very few persons over 70 years of age.

The age distribution of the London Road Estate was much the same as that of the Nacton Estate.

The Gainsborough population was the youngest of the three. The greatest number in this case was found under 5 years of age. The numbers decined rapidly to the 15-20 age period, and then rose to a second, but smaller maximum in the 25 to 35 age period, after which it declined very rapidly. There were only 8 people over 70 years of age in this area at the 1931 Census, although the Census population was 2,628.

The effect of this variation of the age distribution of the population upon the birth and death-rates is obvious.

BIRTH-RATES.

The average birth-rate of the Nacton Estate between 1921 and 1930 was 33.8, as compared with 18 for the town as a whole.

In the three years 1921-1923 the average birth-rate in this area was 50.0 per 1,000 living. In 1930 this had declined to 27.0 per 1,000 living, and in 1932 still further to 18.1 per 1,000. So far, therefore, as the Nacton Estate is concerned, the days of high birth-rates are over and the rates may be expected to continue in future in close attendance upon those of the whole town.

In the case of the London Road Estate, exactly the same experience is revealed. The average birth-rate for the period 1921-1930 was 28.7. In the period 1921-1923 the birth-rate averaged 40.0 per 1,000 living. In 1930 this had declined to 22.6, and in 1932 to 17.8. Thus, the London Road birth-rate stood consistently below that of the Nacton Estate, and nearer the average of the town. This is, I think, associated with the removal of the whole population of an area as compared with the selection of special families from the whole town.

The birth-rate of the Gainsborough Estate during the years 1928-1930 averaged 46.5 per 1,000 living. In 1932 this had declined to 40.9 per 1,000 living.

The birth-rate on this Estate may be expected to behave in exactly the same way as that of the other two Estates.

The Table shows the case.

Year	Birth-rates per 1000 living				
	Nacton	London Road	Gains-borough	All Estates	Town
1921	51.0	48.1	—	49.4	21.7
1922	57.5	35.4	—	55.1	19.7
1923	42.4	37.9	—	41.3	19.1
1924	37.2	32.9	—	36.6	17.5
1925	34.2	27.8	—	33.3	17.1
1926	36.2	24.3	—	34.0	18.4
1927	31.1	25.9	—	30.1	16.8
1928	30.2	24.5	41.7	30.1	16.7
1929	27.7	32.2	44.4	31.6	16.7
1930	27.0	22.6	49.5	31.5	16.9
1931	22.5	21.9	41.8	28.5	15.6
1932	18.1	17.8	40.9	26.8	15.4
1921-1932	30.7	26.2	43.2	32.0	17.6

DEATH-RATES.

The behaviour of the death-rates in the New Estates is in vivid contrast with that of the birth-rates.

The death-rates of the Estates were slightly more than one-half of those of the whole town.

The position may be best explained in the form of a Table.

Year	Death-rates per 1,000 living				
	Nacton	London Road.	Gains-borough	Estates.	Borough
1921	13.60	5.34	—	8.98	11.22
1922	3.79		—	3.03	12.14
1923	6.60	2.53		5.96	10.34
1924	5.45	7.59	—	5.77	9.79
1925	8.45	2.53	—	7.64	12.41
1926	6.04	—		4.90	10.41
1927	7.46	9,56	—	7.80	12.58
1928	4.79	7.01	4.81	5.31	11.28
1929	6.35	6.85	4.94	6,21	12.22
1930	5.64	6.16	5.01	5.59	10.53
1931	6.11	10.96	7.61	7.43	11.73
1932	5.41	9.29	5.88	6.22	12.12
1921 – 1932	6.09	6.85	6.00	6.22	11.40

It appears, therefore, that the death-rates of each of the Estates were just over one-half of those of the whole Borough.

The highest average death-rate was experienced in the London Road Estate and the lowest in Gainsborough.

The population of the London Road area is not quite the same as in the other two areas, as has been pointed out already. This may explain the difference in its death-rates.

Further light on this matter is shed by consideration of the age distribution of the area death-rates, as compared with the corresponding Borough death-rates for the decennium 1921-1930.

PERIOD 1921-1930.

AGE DISTRIBUTION OF THE AREAS AND BOROUGH DEATH-RATES.

Age Periods.	Death Rates		Proportional Ratios
	Areas.	Borough	
— 5	16.118	17.207	93
—10	2.037	2.150	94
—15	.605	1.314	46
—20	2.705	1.977	136
—25	3.061	2.913	105
—30	3.044	3.034	100
—35	3.901	3.597	108
—40	3.640	4.159	87
—45	5.681	5.931	95
—50	5.177	7.850	65
—55	9.523	10.724	88
—60	9.823	14.403	68
—65	13.793	21.854	63
—70	50.724	35.340	143
+70	89.068	96.150	92
All ages	5.951	11.299	52

These show that at all age periods the area death-rates were below those of the corresponding Borough death-rates, with the exception of the periods 15-20, 20-25, 30-35 and 65-70.

The greatest difference occurred at the 10-15 age period, at which the area death-rate was 54% below the Borough death-rate. On the other side the greatest excess area death-rate occurred at the age period 65-70, the excess being 43%.

The sum total of the series resulted in a decline of 48% for the area death-rate, as compared with the Borough.

The causes of death show some remarkable features. If these are examined from the point of view of the group classification in the International List we find that the greatest number of deaths was referred to the group including Congenital Malformations, Prematurity, Atrophy and other diseases peculiar to Early Infancy. The death-rate per 1,000 births from this group in the areas was 37.301, as compared with 29.494 for the whole Borough for the period 1921-1932, an excess of 26% for the areas.

Next in order comes the group of Respiratory Diseases with a death-rate of 1.089 per 1,000 living, as compared with 1.787 for the whole Borough. In this case, therefore, the areas experienced a favourable mortality of 64%. In the case of the areas, Pneumonia, largely Broncho Pneumonia, was the principal cause of the Respiratory Mortality-rate, about two-thirds of the rate being referred to this cause.

Bronchitis was thus of comparatively little importance. This contradicts the experience of the Borough as a whole, where Bronchitis is the chief cause of the Respiratory death-rate. In the areas, the preponderance of young people relatively prone to Pneumonia and the comparative absence of old people prone to Bronchitis, appears to provide an adequate explanation of the discrepancy.

Tuberculosis comes third in the list with a death-rate for the whole period from all forms of Tuberculosis of .949 per 1,000 living, as compared with .993 for the Borough. In this case, there was a small favourable proportion of 4%. In this particular case the figures are misleading, because they are influenced to a very considerable extent by policy. This applies with particular force to the Nacton Estate. In this area preference was given to persons with families in which there were cases of Tuberculosis, in a sufficient number of cases to vitiate the whole of the Tuberculosis statistics.

In the case of the London Road area the population is very largely a transferred slum population.

In the Gainsborough Estate preferential transfer has operated only to a minor degree.

It is, therefore, quite in accordance with expectation that the Tuberculosis death-rates of the Nacton Estate should be 1.016 per 1,000 living for the period 1921-1932, of the London Road area slightly higher at 1.032 per 1,000 living for the same period, whereas in the Gainsborough Estate it was as low as .615 for the five years ending 1932.

The group of the seven Principal Zymotic Diseases follows Tuberculosis. In this case, however, the mortality experience of the areas was considerably above that of the town as a whole. Thus, the area Zymotic death-rate for the period 1921-1932 was .562 per 1,000 living, as compared with .310 for the whole Borough. Thus, the areas showed a Zymotic fatality of 80% above that of the Borough.

The causes of death were Diarrhœa (under 2 years of age) 13, Diphtheria 8, Whooping Cough 6, Measles 4, and Scarlet Fever 1.

The death-rate was highest in the London Road area and lowest in Gainsborough. The age distribution of the population is responsible for much of the discrepancy, whilst a mere change of residence is insufficient to eradicate the habits of a life-time, replace ignorance by knowledge, or endow the unintelligent with intelligence.

In the case of Diseases of the Heart and other parts of the Circulatory System, the areas showed a death-rate of .527 per 1,000 living, as compared with 1.906 for the whole Borough. In this instance the area death-rate was 261% below that of the Borough. In this group the special age distribution of the population played a preponderating part.

The case of Cancer illustrates the same position very forcibly. The area death-rate for the period 1921-1932 from all forms of Cancer was .029 per 1,000 living, as compared with 1.495 for the whole town for the same period.

This is a striking illustration of the influence of the age of the population in connection with Cancer experience.

The influence of sex in the production of the death-rate deserves some consideration.

In the areas in the first place there was at the Census of 1931 an almost equal distribution of the sexes, the usual female excess being absent. The male death-rate for the areas for the period 1921-1932 was 6.661 as compared with 5.816 for females.

In the whole Borough in the same period the male death-rate was equal to 11.777 per 1,000 living, as compared with 11.081 for females.

The proportional ratio of the female to the male death-rate in the areas was thus 873, as compared with 940 in the whole Borough. Thus, the female mortality rate in the areas was definitely lower than in the Borough, the reason being that there were, in fact, fewer female than male deaths at all ages.

This is related to the age distribution of the population, which in a young population undisturbed by immigration tends to equality of sex numbers, whereas unselected ordinary populations show a large excess of females owing to the definitely lower female death-rates at practically all ages which, in turn, is responsible for the longevity of the sex.

The Infant death-rates in the areas furnish food for a good deal of thought. In the period 1921-1932 the Infant death-rate of the three areas was equal to 61 per 1,000 births, as compared with 55 for the Borough, an excess infant mortality from all causes for the area of 10%. It will be recollected that the death-rate at all ages was 48% below that of the whole Borough.

Examination of the age distribution of the Infant Mortality shows that there was excess area fatality at all age periods under three months, beginning with that under 1 week. There was also excess at from 3-6 months. At the other monthly periods the mortality experience was about the same as the town.

The age period distribution indicates high area mortality from Congenital Malformations, Prematurity, Atrophy, Debility, Marasmus, and the other Diseases peculiar to Early Infancy.

It has been shown already that the Infant death-rate from this group in the areas exceeded that of the same group in the whole Borough by 26%.

In the case of Pneumonia, the Infant Mortality rate of the areas was 9.322, as compared with 6.259 for the whole Borough, an area excess of 48%.

The Infant Mortality rate from Zymotic Diarrhœa was equal to 5.485 in the areas, as compared with 3.665 in the whole Borough. In this case the area excess was equal to 49%.

The Infant death-rate from the whole group of the 7 Principal Zymotic diseases in the Borough was equal to 6.485 per 1,000 births, whereas in the areas the rate was 8.228, an excess of 26%.

The Infant Mortality-rate from Tuberculosis in the areas was 1.645, as compared with 0.733 for the whole Borough, the excess being equal to 124%. In this case the selection of Tuberculous families as a part of policy affords a sufficient explanation of the discrepancy.

The Infant Mortality-rate varied with the areas. Thus, it rose from 51 in the Gainsborough Area to 61 in the Nacton Estate, and 78 in the London Road area

The high rate in the London Road area was associated with excessive mortality under 1 week from Prematurity. The Infant rate under 1 week rose from 16 in the Gainsborough Estate to 21 in the Nacton area and 39 in London Road. Under 1 month the rate was 28 in Gainsborough, 30 in Nacton, and 50 in London Road

Whilst on this subject, it is worthy of note that the Stillbirth proportion for the combined areas was below that of the whole town. It varied from 2.8% in Gainsborough to 3.5% in Nacton and 7.0% in London Road. There may be an association here with the high Prematurity death-rate in the London Road area. It is difficult to find a satisfying explanation for the high Infantile death-rates from Congenital Malformations, Prematurity, etc., in these areas.

It is possible to summarise the survey of the mortality experience of the New Estates as follows :—

(1) The populations are young, because selected as a matter of policy. They are not the same from the age view point as the population of the Town.

(2) The birth-rates are governed by the policy of selection of people with young and increasing families. As these people are not leaving the New Estates in any great numbers, it follows that the declines evidenced in the birth-rates must continue until the age distribution of the population becomes the same as that of the town as a whole, when the birth-rates of the areas and the town may become the same. Definite statistical evidence pointing to this conclusion has been produced.

(3) The death-rates at all ages show rates very favourable to the New Estates. Our enquiry has shown that much of this is definitely associated with the age distribution of the population. It has been proved that the death-rates from Cancer, Degenerations of the Heart, Bronchitis, and other degenerative diseases of elderly people are very low in these Estates, the explanation being the small numbers of elderly people in the Estates. The rates are the death-rates of young people. It has been shown that the Estates show a favourable mortality experience at every age period with three exceptions, as compared with the Borough.

The proportional age period declines in the death-rates at the higher ages must be regarded as of doubtful significance in view of the small number of persons involved.

(4) The Infant Mortality-rates are higher in the New Estates than in the town as a whole.

The higher rates are due to excessive mortality in the New Estates from Congenital Malformations, Premature Birth, Atrophy and Marasmus, and the other diseases peculiar to Early Infancy. The excess mortality is confined practically entirely to the ages under three months.

No adequate explanation of this position is forthcoming.

INFECTIOUS DISEASES.

The following Table gives the numbers and rates of notifications received since 1921 :—

Diseases Notified	1921—1925.		1926—1930.		1932.		1933.	
	Nos.	Rate.	Nos.	Rate.	Nos.	Rate.	Nos.	Rate.
Chicken Pox ...	2182	5.37	3596	8.43	651	7.38	336	3.77
Diphtheria ...	736	1.81	472	1.10	178	2.02	135	1.51
Scarlet Fever ...	581	1.43	983	2.29	346	3.92	194	2.17
Pneumonia ...	543	1.33	484	1.13	81	.92	112	1.25
Erysipelas ...	120	.29	140	.32	35	.39	54	.60
Puerperal Fever ...	60	14	73	.17	9	.12	24	.27
Puerperal Pyrexia	—	—	33	07	4	.04	7	.08
Ophthalmia Neonatorum ...	53	13	52	12	13	.14	9	.10
Enteric Fever ...	34	.08	37	.08	5	.05	1	.01
Malaria	19	.04	3	.006	—	—	1	.01
Dysentery ...	2	.004	—	—	—	—	—	—
Encephalitis Lethargica ...	8	.02	13	.03	2	.02	1	.01
Anterior Poliomyelitis	8	02	8	.018	1	.01	—	—
Cerebro-Spinal Fever	7	01	10	.02	—	—	1	.01
Acute Polio Encephalitis ...	1	002	1	002	—	—	1	.01
Small Pox ...	—	—	1	002	—	—	—	—
TOTAL ...	4354	10 74	5906	13 85	1325	15.04	876	9.83

Thus, in 1933 there was a considerable diminution in the number of notifications both of Diphtheria and Scarlet Fever.

On the other hand, there were increases in Pneumonia, Puerperal Fever and Erysipelas.

SMALLPOX.

No cases of Smallpox were notified in 1933.

SCARLET FEVER.

Table showing the number of cases of Scarlet Fever notified, the attack rates, the number and proportions of the cases removed to Hospital, and the case fatalities per cent. in terms of decennia and quinquennia since 1891 :—

Periods.	Notifications.		Removals.		Case Fatality per cent.
	Numbers.	Attack Rates per 1,000 living.	Numbers.	Proportion per cent.	
1891—1900	2,654	4.29	993	37	1.9
1901—1910	1,126	1.60	880	78	1.3
1911—1920	2,683	3.51	2,070	77	1.6
1921—1930	1,562	1.87	1,423	91	.5
1891—1895	1,792	6.01	620	35	2.1
1896—1900	862	2.69	373	43	1.7
1901—1905	692	2.02	517	74	.8
1906—1910	434	1.20	363	83	2.1
1911—1915	2,065	5.45	1,513	73	1.8
1916—1920	618	1.59	557	90	.9
1921—1925	581	1.43	533	91	1.0
1926—1930	981	2.29	890	90	.3
1931	495	5.64	461	93	.6
1932	346	3.92	324	93	.3
1933	194	2.17	184	94	—

Scarlet Fever was less prevalent than in any year since 1928, and the notification-rate dropped back from the level of the two previous years to a little below the average for the period 1926-1930.

The proportion of removals remains very high.

There were no fatal cases in 1933, the eighth occasion on which such an experience has occurred since 1891, the other years being 1901, 1903, 1911, 1921, 1925, 1926 and 1927.

The average case fatality per cent. for the last three years was equal to 0.3%, the same as in the previous quinquennium.

The mild type of disease persists. This is not related to notification, as it appeared on the scene and was well established after 1885, 6 years before notification came into force.

DIPHTHERIA.

Table showing the number of cases of Diphtheria notified, the attack rates, the numbers and proportions of the cases removed to Hospital, and the case fatality per cent. in terms of decennia and quinquennia since 1891 :—

Periods.	Notifications.		Removals.		Deaths.
	Numbers.	Attack Rates per 1,000 living.	Numbers.	Proportion per cent.	Case Fatality per cent.
1891—1900	536	88	33	6	29.3
1901—1910	791	1.12	461	58	12.9
1911—1920	1.779	2.33	1,618	90	7.1
1921—1930	1,208	1.45	1,167	96	4.3
1891—1895	273	91	12	4	37.7
1896—1900	263	.82	21	8	20.5
1901—1905	428	1.22	185	43	13.5
1906—1910	363	1.01	276	76	12.1
1911—1915	628	1.66	532	84	9.4
1916—1920	1,151	2.97	1,086	94	5.9
1921—1925	736	1.81	708	96	3.4
1926—1930	472	1.10	459	97	5.7
1931	348	3.97	336	96	6.9
1932	178	2.02	176	99	6.7
1933	135	1.51	132	98	5.1

135 cases were notified in 1933, as compared with 178, 348, 133, 192 and 110 respectively in the five preceding years.

The Table explains the situation.

The maximum density of Diphtheria infection in Ipswich occurred in the years 1919-1921 inclusive, when 1,262 cases were notified. The case fatality per cent. of this group was 4.6%. In the years 1931-1933 inclusive, the case fatality per cent. was 6.5.

I have referred already to the change in the type of Diphtheria, from a mild variety to a severe type in 1928. The severity continued to increase until 1931. The type at the present moment is definitely milder.

The experience of 1933 illustrates admirably some of the salient features of epidemic disease. Thus, from the beginning of January to the end of August 40 cases of Diphtheria were notified in the whole town, whereas from the beginning of September to the end of December the number was 95. Of these 42 occurred in September, 17 in October, 26 in November, and 10 in December. From the beginning of July to the end of the year 107 notifications of Diphtheria were received, 67 in the Bridge Ward and 40 in the rest of the town.

Examination shows that 2 cases occurred in July in the Bridge Ward, 4 in August, 34 in September, 12 in October, 11 in November, and 4 in December.

Of these notifications, 52 were cases clinically recognisable as Diphtheria, and 15 were infected contacts or carriers, without clinical symptoms. The whole of these 15 cases were found in September and the short period of the outbreak was due to the detection and isolation of these sources of infection.

55 of the cases in the Bridge Ward were of school age, and 12 not of school age.

46 of the cases of school age were cases of Diphtheria, and 9 were positive contacts or carriers.

6 of the cases of non-school age were cases of Diphtheria, and 6 were positive contacts or carriers.

There were 13 houses in the Bridge Ward with more than 1 infected person. In two instances there were 3 infected persons, and in eleven 2 infections.

In the same period in the rest of the town there was only 1 house with 2 infected persons.

There were 52 infected houses in the Bridge Ward in this period, as compared with 39 in the rest of the town.

In one house in the Bridge Ward in which there were three infected persons, there were 2 cases and 1 positive contact. In the other triple infection, there were 3 positive contacts.

In the case of the double infections, in 5 houses there were 10 actual cases, in 4 houses 4 cases and 4 positive contacts, and in 2 houses, no cases but 4 positive contacts.

These facts show that the outbreak was a carrier infection from the outset.

There were 5 fatal cases in the Bridge Ward, 1 in July, 1 in August, 1 in September, and 2 in December.

The fatality rate of the actual outbreak was thus 9.6%, excluding the positive contacts and carriers from the calculation.

The striking features of the outbreak were its explosive character and its short duration, which I ascribe to the detection of the responsible carriers.

It appears that the outbreak in the Bridge Ward has been regarded in some quarters as a unique experience due to purely local conditions.

This view of the case is not in accordance with the facts. There have been many outbreaks of Diphtheria in different parts of the town in recent years.

Thus, in 1932, Diphtheria was far more prevalent in the St. John's district than in any other part of the town. In 1931 there was an extensive and severe outbreak in the St. John's district, including some 103 cases.

From November, 1929, to March, 1930, there was a sharp outbreak in St. Clement's, and from January to May, 1929, in St. Margaret's.

The last really extensive outbreak in the Bridge Ward prior to that of 1933 occurred between September, 1919, and March, 1920, including some 76 cases.

These facts are given in illustration of the behaviour of the disease in its epidemic form. Similar experiences could be multiplied indefinitely.

ENTERIC FEVER.

Table showing the number of cases of Enteric Fever notified, the attack rates, the number and proportions of the cases removed to Hospital, and the case fatality per cent. in terms of decennia and quinquennia since 1891 :—

Periods.	Notifications.		Removals.		Case Fatality per cent.
	Numbers.	Attack Rates per 1,000 living.	Numbers.	Proportion per cent.	
1891—1900	938	1.51	376	40	12.8
1901—1910	485	.69	388	80	16 1
1911—1920	77	10	62	80	7.7
1921—1930	71	.08	58	81	7.0
1891—1895	383	1.28	130	34	14 3
1896—1900	555	1.73	246	44	11.7
1901—1905	380	1 11	297	78	17.1
1906—1910	105	.29	91	86	12.4
1911—1915	56	.14	46	82	5 3
1916—1920	21	.05	16	76	14.3
1921—1925	34	08	28	82	8 8
1926—1930	37	08	30	81	5.4
1931	3	03	3	100	—
1932	5	05	5	100	20 0
1933	1	01	1	100	—

There were no cases of any of the Typhoid group notified in Ipswich in 1933.

The case recorded was found in the Port on a Russian ship. There was very little clinical evidence that this was a genuine case of Paratyphoid B., although the blood test was positive.

EPIDEMICS.

Mankind has been the victim of epidemic diseases for untold ages, and it is an interesting speculation as to whether the diseases that are prevalent to-day are the same as they were thousands of years ago. I do not mean that these diseases remain absolutely unchanged for eons of time, and, indeed, I have drawn attention repeatedly in these Reports to the fact of variations in infections. The essential points in this relation are whether these variations are cyclical and regular, or irregular in their periodicity.

According to Goodall there are only three modern infections recognisable as part of the Hippocratic collection, viz., Mumps, Puerperal Fever and Erysipelas, but it would be quite unjustifiable to assume that diseases such as Scarlet Fever, Measles, Typhoid Fever, Smallpox and Influenza did not exist in the remote past. The difficulty in these cases is that the descriptions of the signs and symptoms of diseases observed by the ancients and their interpretations of them, present pictures which may be unrecognisable in the forms seen by us to-day.

That this should be so, need occasion no surprise since man describes and interprets what he observes entirely from the particular angle from which his mind approaches the subject.

The angle of to-day is quite different from that of the closing decades of the last century, to say nothing whatever of more remote times.

It is not too much to claim that the progress made in the knowledge of diseases within the last fifty years has far surpassed that of any other period of medical history. The key that has unlocked the door is the knowledge that all the infections are due to the activities of germs.

The study of these low organisms has shown how they live, and how they cause disease, and has provided the answer to the question as to why, when persons are attacked by the same disease under apparently the same conditions, some recover and others die.

The mode of attack leading to death has been revealed, and the method of defence possessed by the human body have been laid bare sufficiently to establish the means whereby the germ attack is met and repelled and recovery ensues.

The interplay of the forces of attack and defence endow those who recover with a new quality in virtue of which, for practical purposes, they become immune from the disease for longer or shorter periods. In some cases, e.g., Smallpox and Scarlet Fever, the immunity is for practical purposes lifelong. In others it is quite short, as, for example, Influenza.

In the past explanations of epidemics were associated with the modes of thought prevalent at the time of their occurrence. Thus, in times of religious disturbance they were regarded as a punishment of mankind by the offended Deity, and their cessation was evidence that mankind had purged the offence. There are people who believe this to-day. Others, groping in darkness, postulated an epidemic constitution, meaning thereby some special disposal of the conditions of life favourable to the establishment and maintenance of the epidemic state.

These and other vague speculations as to the causation of epidemics held the field for centuries, indeed, until towards the end of the 19th century, when the influence of germs in the production of disease became accepted by the vast majority of the medical profession of this and all other civilised countries as an established fact. Subsequent experience has produced abundant corroboration of the truth of this statement of the case.

In the middle of the 18th century the population of this country was predominantly rural. The towns were few and far between, and with one or two exceptions, quite small.

Whether they were large or small, the towns had the characteristic that they were built without the slightest regard to health requirements as we know them. They were filthy in the extreme, without sewers, with a poor and nearly always contaminated water supply, densely crowded, unscavenged, unpaved, the inhabitants ravaged by disease and recurrent epidemics.

Nothing was done to remedy these evils unless a particularly terrible visitation induced a temporary clean up, and some spasmodic efforts to look after the sick.

Nobody knows what the death-rates of these periods really were, but the slowness of the increase in the population is ample evidence of the heavy toll upon the life of the community.

With the commencement of the Industrial era, with its consequent aggregation of large numbers of people attracted to the immediate vicinity of the factories, the evils of unrestricted town building on the insanitary models of the past were accentuated in consequence of the large size of the communities concerned.

The evils of insanitation in a small town were bad enough, but the same evils in a large town became disastrous, with the result that the health conditions of the industrial towns in the earlier part of the 19th century were appalling. One of the worst of these towns was Ipswich (vide Clarke's History of Ipswich, 1850).

This does not agree with the statement in Evelyn's Diary that he found Ipswich one of the cleanest towns in England. This discrepancy no doubt arose from the difference in the point of view of the 17th and the 19th century.

The evils of these days gradually evolved a recognition of the relation between conditions of life and the state of the Pubilc Health, and from this there was born a sanitary conscience and the sense of social obligation from the Public Health angle as we know it.

Numerous Acts of Parliament, e.g., the Act of 1848 and the Foundation Public Health Act of 1875, passed by Benjamin Disraeli in spite of the indifference of his Party and public inertia, paved the way for the tremendous advances in Public Health since the closing decades of the 19th century.

Associated with this the true science of disease came into being out of a welter of empiricism and ignorance.

Lister's discovery of antiseptic surgery, supplemented by the discovery of anæsthesia, made possible the aseptic surgery of to-day. This is the greatest of all the triumphs of the practical application of the germ concept of disease.

As town conditions improved, drainage, sewerage, water supplies, refuse removal, paving of streets and yards, etc., etc., health conditions improved, and thus it arose that attention continued to be focussed on conditions of environment as the prime sources of epidemic diseases.

The epidemic, at this stage in the evolutionary process, consisted of the actual cases of the disease.

Naturally, therefore, the procedures proper to the state of knowledge were the improvement of environment and the isolation of the persons sick with the disease. That was the position at the beginning of this century.

In the meanwhile, further great strides had been made in the knowledge of the action of germs when introduced into the human body and the nature of the response of the defensive forces of the body, and enquiries began to be made into the actual modes of germ entrance.

This line of enquiry led to the discovery of the fact that there were many ways in which entry was effected.

Thus, Typhoid Fever and Cholera were found to be due, in the main, to the drinking of water infected with the germs of Typhoid Fever or Cholera.

Malaria and Yellow Fever were found to be due to the bite of certain mosquitoes, the infection of these diseases being conveyed directly from an infected person to a healthy one by the mosquito. It was the discovery of this fact that built the Panama Canal.

Bubonic Plague is transferred from the rat to man by the bite of the Rat Flea.

Typhus Fever is conveyed from the sick to the healthy by the bite of the body Louse and possibly the Bug.

All these insects act in the same way, viz., by transferring the germs of the disease from the blood stream of the infected to the blood stream of the healthy.

In still other cases, such as Influenza, Scarlet Fever, Diphtheria, Measles, Whooping Cough, Smallpox, Cerebro-Spinal Fever, etc., the site of entrance of the infection is the nose and throat, and the infection is conveyed from one person to another by means of the expired air which issues from the nose and mouth of the infected person laden with the germs of the infection. Anyone breathing air of this kind is liable to infect his nose and, or, throat and in due course may show evidence of the disease.

Thus, these diseases are due to personal infection.

It does not require any medical knowledge to appreciate the obvious fact that this last group of infections is precisely the one most likely to be prevalent under conditions of modern life, with its crowded towns, its speed of transport, and its people still harbouring views on the nature of epidemic disease, long ago abandoned.

These illustrations will suffice to show that whilst there are many modes of conveyance of infection, all meet on the common ground of encompassing the invasion of the healthy body by the living germs of disease.

The advances of modern sanitation have brought about the disappearance in all properly regulated communities of water borne diseases such as Typhoid Fever and Cholera. No town is complete without an ample supply of pure water obtained from adequately protected sources.

Proper systems of house drainage, sewerage, methods of sewage disposal and municipal cleanliness in all its branches, have abolished Diarrhœa, and have enormously diminished the states of chronic ill-health which were inevitable consequences of living under conditions of insanitation such as to render the people liable to succumb to any epidemic disease prevalent at the time. In this way insanitation became associated in the public mind as the direct cause of such diseases as Smallpox. Scarlet Fever, Diphtheria, etc. This is not the case. What is the case is that persons living under insanitary conditions are more likely to develop the particular disease when the infection is about. Under modern conditions the infection of Scarlet Fever and Diphtheria is always about.

If it were the case that the isolation of the sick meant the isolation of the epidemic, then the high proportion of Hospitalisation practised in Ipswich for the last 25 years ought to have had some effect upon the prevalence of Scarlet Fever and Diphtheria.

Reference to the part of this Report dealing with the prevalence of both these diseases since 1891 will give the answer in quite unequivocal terms. Briefly we have failed quite definitely to influence either from the point of view of prevalence.

This consideration amongst others has led observers to enquire why a common sense proposition, such as isolation, should have failed to achieve its purpose if the epidemic did, in fact, consist of sufferers from the disease only.

The enquiry has resulted in the discovery of what had long been suspected, viz., that the actual victims of the disease are only the visible evidence of a far wider invisible infection of the community with the germs of the disease.

In a Report of this kind the technical evidence in proof of this position cannot be given, but the broad general lines of proof can be indicated quite clearly :—

1. It is common knowledge that in the case of infections such as Scarlet Fever, Diphtheria, etc., children are the victims, not adults.

2. It should be common knowledge that Scarlet Fever and Diphtheria are never absent from our town populations. In other words, the infection is always present.

3. It has been found that some members of the community are susceptible to these diseases and some are not.

4. It has been proved that the number of insusceptibles increases as age advances.

5. It has also been proved that the proportion of insusceptibles increases as the density of the population increases.

6. It has been proved that the number of insusceptibles is far greater than the number of persons known to have suffered from attacks of the disease.

People become insusceptible to infectious diseases in one way and one way alone.

Insusceptibility or immunity is the state induced by the attack on the defensive forces of the body, the living cells of the body, by the living germs which cause the particular disease.

The germs attack the body cells by means of poisons or toxins, and the cells answer by producing anti-poisons or anti-toxins. If enough anti-toxin is produced sufficiently quickly the germ attack is nipped in the bud, and the individual goes on his way unharmed without the slightest knowledge that he has been engaged in any conflict at all.

On the other hand, if the response of the body cells to the germ poison is insufficient, then the individual will suffer from an attack of the disease from which he may recover or die.

If he recovers, he is as a rule, insusceptible or immune from another attack of the disease. But, he is not immune from being reinfected if he runs up against infection at a later period. In this case the body cells are in a different case than in the first instance, because they have acquired and retain the capacity to produce the anti-toxins requisite to deal with the new infection rapidly and efficiently, and thereby frustrate the development of the disease. This is the real meaning of "not catching it again."

Exactly the same quality is acquired by the body cells of those who resist attacks of infection without showing signs of the disease. Such people deal with subsequent infections in exactly the same way as those who have actually had the disease, although their immunity is presumably not so high as that of those who have actually passed through an attack.

This is nature's method of producing immune populations, using the germs themselves to immunise the community against the ever present germ attack.

This is how diseases rise and wane with the variations in the number of susceptibles in the community.

There is always the army of young susceptibles and the host of immunised adults.

If the number of immunes is large there are few cases of the disease, and it will be understood that the number of immunes is always at its highest after a period of prevalence of the infection. That is the real meaning of an epidemic coming to an end. It does so because the population has been immunised during the epidemic period, and multitudes of people who have never had the disease are found to have been immunised.

This brings in the question of carriers and positive contacts. By carriers are meant persons who may or may not have had the disease, but who retain the living germs in their tissues for more or less prolonged periods, and are potent agents of infection dissemination.

By positive contacts, I mean people who harbour the infection for only a short period, but do not develop the disease. During the infected period these people can and do pass on infection to others.

And that is why the epidemic of infection is so much greater than the epidemic of victims, and that is how nature fights germ diseases.

Man is now equipped with the means to fight disease on nature's lines if he has the intelligence to use them. He can prevent Smallpox by vaccination, and if Smallpox were the disease it was up to the 'seventies of last century, he would, as he did.

Typhoid Fever was practically abolished from the armies in the Great War by anti-typhoid innoculations, a stupendous achievement without parallel in the history of war.

Tetanus was robbed of its terrors by the use of antitetonic serum as a preventive, another success of which far too little has been heard.

Cerebro Spinal Fever can be, and is being successfully treated with anti-meningococcal serum, and, for the disease, a high recovery rate secured, and a higher rate could be secured if the cases were recognised more quickly.

Anti-Diphtheria serum is a definite cure of Diphtheria if it is used in proper quantities and early in the disease, before irremediable damage has been inflicted.

Diphtheria can be prevented by the immunisation methods now evolved which consist in the injection of minute quantities of the toxin of Diphtheria, deprived of injurious materials, which act upon the cells of the body in exactly the same way as in the case of infection with the germ, but without the dangers of the germ itself. The body cells answer the toxin in exactly the same way as they do in the case of infection and acquire the quality of rendering the innoculated person insusceptible or immune to any ordinary dose of the germ itself.

The safety of the present methods has been proved to demonstration, and their preventive value is placed as high as 90%.

The opposition to Diphtheria immunisation is based upon a complete lack of knowledge of the true position of the case. The pity of it is that many children will pay for it with their lives.

TUBERCULOSIS.

NOTIFICATIONS OF TUBERCULOSIS SINCE 1909.

Table A.

Number of cases notified.

Year.	Pulmonary.			Non-Pulmonary.			All Forms.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
1909	41	23	64	—	—	—	41	23	64
1910	29	15	44	—	—	—	29	15	44
Average	35	19	54	—	—	—	35	19	54
1911	75	57	132	—	-	—	75	57	132
1912	178	152	330	—	—	—	178	152	330
1913	112	88	200	58	52	110	170	140	310
1914	98	58	156	18	23	41	116	81	197
1915	60	56	116	18	20	38	78	76	154
1916	91	77	168	19	17	36	110	94	204
1917	77	78	155	18	12	30	95	90	185
1918	81	97	178	16	18	34	97	115	212
1919	82	82	164	26	39	65	108	121	229
1920	70	67	137	39	36	75	109	103	212
Average	92.4	81.2	173.6	21.2	21.7	42.9	113.6	102.9	216.5
1921	173	131	304	41	35	76	214	166	380
1922	90	65	155	23	21	44	113	86	199
1923	72	61	133	38	36	74	110	97	207
1924	72	69	141	24	28	52	96	97	193
1925	72	74	146	34	32	66	106	106	212
1926	55	68	123	41	35	76	96	103	199
1927	68	59	127	26	27	53	94	86	180
1928	72	69	141	20	24	44	92	93	185
1929	63	69	132	25	32	57	88	101	189
1930	62	54	116	19	26	45	81	80	161
Average	79.9	71.9	151.8	29.1	29.6	58.7	109.0	101.5	210.5
1931	69	63	132	24	23	47	93	86	179
1932	70	75	145	19	28	47	89	103	192
1933	80	82	162	21	19	40	101	101	202

There was an appreciable increase in the number of notifications of Pulmonary Tuberculosis, but a decline in that of all other forms of Tuberculosis.

The nett result was a definite increase in the total notifications.

NOTIFICATION RATES.

Table giving the rates for 1933, and previous two years and decennia :—

Periods.	Pulmonary.			Non-Pulmonary.			All Forms.		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
1911—1920	2.55	2.01	2.27	.58	.54	.56	3.13	2.55	2.83
1921—1930	2.03	1.63	1.82	.74	.67	.70	2.77	2.30	2.52
1931	1.66	1.36	1.50	.58	.49	.53	2.24	1.85	2.03
1932	1.68	1.61	1.64	.45	.60	.53	2.13	2.21	2.17
1933	1.90	1.74	1 82	.50	.40	.45	2.40	2.14	2.27

The Notification Rates show an increase in the Pulmonary rate over the previous year or two, especially the male rate. The rate for persons returned to the average of the decennium 1921-1930.

The Non-Pulmonary rate shows a decline, particularly in the case of females.

AGE AND SEX DISTRIBUTION OF THE NOTIFICATIONS OF TUBERCULOSIS, 1933.

Age.	Pulmonary.			All other forms.			Total 1933.			Total 1932.
	M.	F.	P.	M.	F.	P.	M.	F.	P.	Persons.
— 1	—	—	—	—	—	—	—	—	—	4
1— 5	1	—	1	3	4	7	4	4	8	10
5—10	15	19	34	4	6	10	19	25	44	36
10—15	7	4	11	6	1	7	13	5	18	22
15—20	6	13	19	1	—	1	7	13	20	16
20—25	8	8	16	—	3	3	8	11	19	20
25—35	15	12	27	2	1	3	17	13	30	34
35—45	13	14	27	—	2	2	13	16	29	22
45—55	11	5	16	1	1	2	12	6	18	15
55—65	4	4	8	2	—	2	6	4	10	9
65+	—	3	3	2	1	3	2	4	6	4
Total ...	80	82	162	21	19	40	101	101	202	192

The age distribution of the notified cases of Pulmonary Tuberculosis shows that the increases recorded of recent years have occurred at the 5-10 age period. The other age periods show nothing more than normal variation from the average experience.

PRINCIPAL SITES OF TUBERCULOSIS.

The following Table shows the number of cases of the different varieties of Tuberculosis, notified since 1921 :—

Situation of Disease.	Average 1921—1925	Average 1926—1930	1929	1930	1931	1932	1933
Pulmonary ...	175.6	127.8	132	116	132	145	162
Abdominal ...	7.6	8.6	4	9	4	3	4
Cerebral ...	5.2	6.0	8	5	11	4	4
General ...	0.6	0.2	1	1	—	—	—
Bones and Joints	19.6	13.4	15	6	5	9	10
Glands ...	17.2	20.4	23	19	24	26	18
All other forms of T.B	12.4	6.0	6	5	3	5	4
TOTAL ...	238.2	182.4	189	161	179	192	202

The site distribution of the disease shows a steady increase in the number of notifications of the Pulmonary variety of recent years.

There is a definite decline in the Abdominal variety.

Cerebral Tuberculosis seems to be stationary, but Tuberculosis of the Bones and Joints seems on the average to be declining.

The Glandular type remains fairly steady, but it does not, and never has shown, the real degree of prevalence of Glandular Tuberculosis.

TUBERCULOSIS SURVIVAL TABLE CORRECTED TO DECEMBER 31st, 1933.

The number of persons notified as suffering from the various forms of Tuberculosis and known to have survived on December 31st, 1933, are shown as follows :—

Sex.		Pulmonary.	Non-Pulmonary.	All Forms.
Males		702	303	1005
Females		665	300	965
Persons		1367	603	1970
Persons	1932	1273	608	1881
	1931	1225	576	1801
	1930	1194	566	1760
	1929	1179	529	1708
	1928	1145	506	1651
	1927	1092	527	1619
	1926	1095	484	1579
	1925	1054	436	1490

The Survival Table exhibits no departure from tendency. The notified cases, Pulmonary and Non-Pulmonary, slowly accumulate. Since the beginning of notification in 1909, 3,801 cases of Pulmonary Tuberculosis have been notified in Ipswich. Of these there were at the 31st December, 1933, 1,367 known survivors.

TUBERCULOSIS DISPENSARY.

The number of cases on the Dispensary Register (as distinct from the Notification Register) at December 31st, 1933, was 795.

This figure includes only those cases presenting themselves at the Dispensary during the last two years.

460 X-Ray examinations were carried out during 1932.

The Tuberculosis Officer paid 7 visits to the homes of patients, and, in addition, furnished Practitioners with 261 written reports upon patients sent to him for examination.

Year.	No. of Patients attending Dispensary.	No. of Visits paid by Patients.	No. of Visits to Homes by Nurse.
Average 1921—1925	569	3000	2622
1926—1930	587	2331	3171
1926	547	2823	3176
1927	587	2771	3194
1928	599	2289	3578
1929	605	1916	3079
1930	600	1858	2827
1931	581	2156	3495
1932	646	2734	3128
1933	760	2817	3641

INSTITUTIONAL TREATMENT OF TUBERCULOSIS.

During the year 204 patients were admitted to Institutions for the treatment of Tuberculosis, 187 were discharged, and 19 died.

With regard to the cases discharged from Institutions, the following summary of the results of treatment is furnished by the Medical Superintendents :—

Condition at time of discharge.	No. of cases			
	Pulmonary.	Other Forms of Tuberculosis	Others.	Total.
Quiescent	72	31	—	103
Not Quiescent	46	13	—	59
Observation only		—	25	25
TOTAL	118	44	25	187

During the year 236 cases, including 105 cases from Ipswich, were treated to a conclusion.

Table 1 shews the classification of all the cases. Table 2 shews the classification of the Ipswich cases separately.

Among the cases shewn as " Not Quiescent " are many sufficiently improved to be able to resume their employment.

The Tables are in accordance with the regulations of the Ministry of Health.

TABLE I. ALL CASES.

Classification on Admission		Condition at time of Discharge	Under 3 Months			3–6 Months			6–12 Months			More than 12 Months			Totals			Grand Totals
			M	W	C	M	W	C	M	W	C	M	W	C	M	W	C	
Pulmonary Tuberculosis	Class T.B. Minus	Quiescent ...	7	1	5	18	25	8	1	5	22	—	1	5	26	32	40	98
		Not Quiescent		6	6	1	2	1	—	—	3	—		—	1	8	10	19
		Died in Institution ...	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. Plus Group 1	Quiescent ...	—		—	5	—	—	1	2	—	—	—	—	6	2	—	8
		Not Quiescent			—	—	—	—	—	—	—	—			—	—	—	—
		Died in Institution ...				—	1	—	—	—	—	—	—	—	—	1	—	1
	Class T.B. plus Group 2	Quiescent ...		—	—	6	3	—	—	1	—	—	—	—	6	4	—	10
		Not Quiescent	3	1	—	14	14	—	4	11	—	—		1	21	26	1	48
		Died in Institution ...		—	—	—	—	—	1	—	—	—	—	—	1	—	—	1
	Class T.B. plus Group 3	Quiescent ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Not Quiescent	5	5	—	9	11	—	3	3	1	—	—	—	17	19	1	37
		Died in Institution ...	3	3	—	1	2	—	1	2	—	—	—	—	5	7	—	12

OBSERVATION CASES

	Diagnosis on Discharge from Observation	Stay under 4 Weeks			Stay over 4 Weeks			Totals		
		M	W	C	M	W	C	M	W	C
For Pulmonary Tuberculosis	Tuberculous ...		1	3					1	3
	Non Tuberculous				1			1		
	Doubtful ...		1						1	
	Totals ...	—	2	3	1			1	2	3

TABLE II. IPSWICH CASES ONLY.

Classification on Admission.		Condition at time of Discharge.	Duration of Residential Treatment.															
			Under 3 Months.			3—6 Months.			6—12 Months.			More than 12 Months			Totals.			Grand Totals.
			M	W	C	M	W	C	M	W	C	M	W	C	M	W	C	
Pulmonary Tuberculosis.	Class T.B. Minus.	Quiescent ...	5	1	4	11	9	7	1	1	18	—	1	5	17	12	34	63
		Not Quiescent	—	4	6	1	—	1	—	—	3	—	—	—	1	4	10	15
		Died in Institution ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. Plus Group 1.	Quiescent ...	—	—	—	1	—	—	1	2	—	—	—	—	2	2	—	4
		Not Quiescent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Died in Institution ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. Plus Group 2.	Quiescent ...	—	—	—	3	1	—	—	1	—	—	—	—	3	2	—	5
		Not Quiescent	—	—	—	2	2	—	2	2	—	—	—	—	4	4	—	8
		Died in Institution ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Class T.B. Plus Group 3.	Quiescent ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Not Quiescent	1	—	—	1	2	—	1	2	—	—	—	—	3	4	—	7
		Died in Institution ...	2	—	—	—	—	—	1	—	—	—	—	—	3	—	—	3

OBSERVATION CASES.

	Diagnosis on Discharge from Observation	Stay under 4 Weeks.			Stay over 4 Weeks.			Totals.		
		M	W	C	M	W	C	M	W	C
For Pulmonary Tuberculosis.	Tuberculous ...	—	—	3	—	—	—	—	—	3
	Non-Tuberculous	—	—	—	—	—	—	—	—	—
	Doubtful ...	—	—	—	—	—	—	—	—	—
	Totals ...	—	—	3	—	—	—	—	—	3

W. F. SUTCLIFFE,
Medical Superintendent.

TREATMENT OF CASES OF SURGICAL TUBERCULOSIS.

A.—East Suffolk and Ipswich Hospital.

The following Table gives the number of Patients treated at the East Suffolk and Ipswich Hospital.

Year.	Remaining from Previous Year.	Admitted.	Treated.	Discharged.	Deaths.	Remaining
1925	12	44	56	45	3	8
1926	8	53	61	48	2	11
1927	11	29	40	36	2	2
1928	2	26	28	22	6	—
1929	—	21	21	19	1	1
1930	1	21	22	20	1	1
1931	1	24	25	18	—	7
1932	7	16	23	19	—	4
1933	4	32	36	31	—	5

B.—Ipswich Isolation Hospital.

Year.	Remaining from Previous Year.	Admitted	Treated.	Discharged.	Deaths.	Remaining.
1925	—	10	10	3	—	7
1926	7	6	13	4	1	8
1927	8	30	38	17	1	20
1928	20	20	40	23	3	14
1929	14	35	49	26	4	19
1930	19	32	51	34	2	15
1931*	15	2	17	17	—	—
1932*	—	19	19		—	19
1933	19	16	35	24	3	8

*Ward closed from 21st January, 1931, to 14th October, 1932

The cases admitted during the year fell into the following groups :—

Bones and Joints	7
Abdominal	1
Glandular	1
Other Forms	2
Observation Cases	5

It is most regrettable that occasions occur on which it is necessary to close this Ward, in order to cope with Epidemics, and very serious consideration should be given to the position.

TREATMENT OF ADVANCED TUBERCULOSIS.

IPSWICH ISOLATION HOSPITAL.

Year.	Remaining from previous Year.	Admitted.	Treated.	Discharged.	Deaths.	Remaining.
1925	18	62	80	35	24	21
1926	21	60	81	39	25	17
1927	17	53	70	28	28	14
1928	14	62	76	22	27	27
1929	27	46	73	24	25	24
1930	24	65	89	34	27	28
1931*	28	19	47	36	11	—
1932	—	35	35	8	8	19
1933	19	48	67	32	18	17

*Ward closed from 8th August, 1931, to 11th May, 1932.

There is reason to believe that the Hospitalisation of advanced cases of Pulmonary Tuberculosis is a valuable means of prevention to other members of the family and an advantage to the patient from the point of view of general care and skilled nursing.

It is, therefore, most unfortunate that it is found necessary to close the Ward from time to time, in order to cope with Epidemic Diseases.

This matter also demands serious consideration.

DENTAL WORK IN CONNECTION WITH TUBERCULOSIS.

Mr. T. A. Edmondson, the Dental Surgeon, reports as follows :—

I beg to report on the dental treatment of Tuberculosis cases for the year ending 31st December, 1933.

	Males.	Females.	Total.
Number inspected at Clinic	49	41	90
,, ,, ,, Isolation Hospital ...	4	2	6
,, of visits to Isolation Hospital ...	—	—	3
,, ,, cases treated	31	34	65
,, ,, attendances made	127	164	291
,, ,, permanent teeth extracted ...	80	122	202
,, ,, local Anæsthetic cases ...	23	29	52
,, ,, Nitrous Oxide administrations ...	14	20	34
,, ,, fillings in permanent teeth ...	51	73	124
,, ,, permanent teeth filled	46	69	115
,, ,, scalings, etc., of permanent teeth	324	376	700
,, ,, Dentures fitted	4	4	8

Of the 96 cases inspected, 60 were candidates for the Ipswich Sanatorium and 8 for the Borough Isolation Hospital.

27 insured persons entitled to dental benefit were referred to Private Practitioners for treatment.

6 cases were sent from the Sanatorium to the Clinic for urgent treatment.

(Signed) T. A. EDMONDSON,
Dental Surgeon.

MATERNITY AND CHILD WELFARE.

MATERNITY WELFARE.

Clinics held under the Maternity and Child Welfare Scheme under the personal supervision of the Assistant Medical Officer (Dr. Doris E. P. Jolly).

Mothers—Wednesday and Friday, 2.30 p.m., Elm Street.

ANTE AND POST-NATAL CLINICS.

The following Table gives the numbers examined and the total examinations by the Medical Officer, Dr. Jolly :—

Year.	Ante-Natal.			Post-Natal			Total Examinations.
	Cases Examined.	Re-examinations.	Total.	Cases Examined.	Re-examinations	Total.	
1924	27	18	45		—	—	45
1925	61	65	126		—	10	136
1926	123	81	204			48	252
1927	206	71	277	52	43	95	372
1928	290	115	405	67	66	133	538
Average	141	70	211				268
1929	311	343	654	79	63	142	796
1930	447	687	1134	92	44	136	1270
1931	476	656	1132	104	44	148	1280
1932	679	1016	1695	63	32	95	1790
1933	747	1122	1869	61	22	83	1952
Average	532	765	1297	80	41	121	1418

ANTE AND POST-NATAL CLINICS.—DEFECTS FOUND

The examinations carried out at the Ante-Natal and Post-Natal Clinics revealed the following defects :—

Defect.	Ante-Natal.			Post-Natal.
	Public Health Dept.	Maternity Home.	Total.	
Albuminuria	14	4	18	—
Anæmia	4	—	4	2
Breast Disorders	—	—	—	1
Contracted Pelvis	1	—	1	—
Debility	1	—	1	2
Dental Caries	265	22	287	15
Disease of Heart	3	—	3	—
Dyspepsia	5	—	5	1
Gynæcological Disorders ...	10	—	10	13
Hæmorrhage	6	—	6	—
Hæmorrhoids	3	—	3	—
Malpresentation	7	2	9	—
Neuralgia	1	—	1	—
Oedema	4		4	—
Ophthalmic Disorders ...	5	—	5	—
Respiratory Diseases ...	6		6	2
Skin Disorders	5	1	6	2
Tuberculosis	6	—	6	1
Varicose Veins	81	14	95	2
All others	25	3	28	4
TOTAL	452	46	498	45

REPORT BY THE MEDICAL OFFICER IN CHARGE OF THE ANTE AND POST-NATAL CLINICS.

ANTE-NATALS.

574 of 1,319 births in the Borough, or 75% of the total midwife deliveries in 1933 made one or more attendances at the ante-natal clinic. The regularity of attendance still varies considerably, and appears to depend to some extent on the midwife booked. There is, however, no doubt that an increasing number of the younger mothers, anyway, are beginning to realise the desirability of ante-natal supervision and to offer far greater co-operation themselves than formerly.

MATERNAL MORTALITY.

No maternal deaths occurred amongst the clinic cases in 1933. During the 10 years the clinic has been in existence 3,367 cases have been seen with two subsequent maternal deaths, allowing 5% for cases found not pregnant on examination. This gives a mortality rate over the 10 years of .6 per thousand.

MATERNAL MORBIDITY.

27 cases were referred to their own doctor or the Hospital for ill-health or complication of pregnancy found during routine ante-natal examination.

Five were cases of severe albuminuria with increased blood pressure, and there were, in addition, thirteen cases of mild or transient albuminuria which responded to rest and dietetic treatment.

The proportion of obvious and severe dental caries remained at about 50%, and it is to be regretted that prejudice against dental treatment, especially of a type to preserve rather than remove the teeth, remains so high, since nearly all the mothers who do submit to treatment freely admit that they have derived great benefit from it.

FOETAL MORTALITY.

16 or 2.7% infants were stillborn, the general rate for the Borough being 4%. Investigation showed as possible contributory factors, 3 cases of prematurity, 2 cases of ante-partum hæmorrhage and 1 case each of maternal diabetes, breech presentation, post maturity, abnormal presentation and difficult labour; in 3 other cases the attendance of the mother was too irregular for adequate examination.

As breech presentation has a considerably higher fœtal mortality than vertex, external version was performed 16 times in breech presentations found during the last four weeks of pregnancy.

POST-NATALS.

During the year this work was still further crowded out by the increasing ante-natal attendances, and it is a matter of regret that it has not been found possible yet to establish a separate session to examine and advise the mothers four to six weeks after delivery.

IPSWICH MATERNITY HOME.

I append a Table which shows the admissions since the opening of the Home in July, 1918:—

Year.	Cases admitted from			Total No of Days.	Average duration of stay in days.	Per cent. of Total Ipswich Births.
	IPSWICH	Outside Areas.	Total.			
1919—1920	144	18	162	2,112	13.0	4.2
1921—1925	356	61	417	4,732	11.3	4.7
1926—1930	560	133	693	7,521	10.9	7.8
1926	71	15	86	935	10.8	4.6
1927	87	15	102	1,154	11.3	6.2
1928	114	27	141	1,562	11.1	8.2
1929	136	31	167	1,803	10.8	9.6
1930	152	45	197	2,067	10.5	10.6
1931	169	50	219	2,296	10.5	12.2
1932	200	33	233	2,494	10.7	14.3
1933	208	34	242	2,580	10.7	15.8

71 per cent. of the women were confined by the midwives at the Home.

In 50 cases, or 24 per cent., medical assistance was sought, in 15 cases during labour, in 26 after labour, and in 9 for the infant.

Six cases of Puerperal Fever and one of Puerperal Pyrexia were notified during the year.

There were no maternal deaths, but 3 infants died under 10 days. Nine infants were stillborn.

The monthly admissions are given below :

January	... 29	May	... 27	September	... 17
February	... 20	June	... 15	October	... 19
March	... 17	July	... 22	November	... 22
April	... 16	August	... 18	December	... 20

This gives an average monthly number of 20, but it was found that in the 4th, 5th and 6th weeks, again in the 21st and 22nd weeks, and finally in the 47th and 48th weeks, the existing accommodation was taxed to the utmost.

MIDWIVES ACTS, 1902 AND 1918.

The number of midwives on the Local Roll at the close of 1933 was 21, and of these 10 were connected with the Ipswich Nurses' Home, Lower Brook Street, and 2 with the Ipswich Maternity Home.

The Ipswich cases attended by midwives amounted to 765, a figure which is made up as under :—

At Maternity Home	151
District Cases attended by Midwives from Ipswich Nurses' Home	238
Unattached or Outside Midwives	376

The midwives attended 58% of the Births registered during the year.

The Table shows the number of cases in which the midwives required medical help :—

Year	Notifications received.			Percentage of Births attended by Midwives in which Medical Help was called in.
	On behalf of Mother.	On behalf of Child.	Total.	
1921-1925	320	164	484	12.5%
1926-1930	372	174	546	12.5%
1926	76	38	114	13.5%
1927	64	37	101	13.0%
1928	78	21	99	12.1%
1929	73	39	112	12.2%
1930	81	39	120	12.6%
1931	88	37	125	15.3%
1932	88	46	134	15.7%
1933	100	40	140	17.7%

The causes for which medical help was reauired are set forth as follows :—

	1933.	1932.	1931.	1930.	1929.	Average 1926—1930.	Average 1921-1925.
MOTHER —							
Torn Perineum ...	40	29	30	27	19	21	16
Prolonged, Tedious or Difficult Labour ...	17	16	16	13	6	12	11
Faulty Presentations...	6	9	7	7	7	7	7
Impactions	—	3	4	4	3	4	4
Hæmorrhages ...	7	11	9	6	9	6	4
Puerperal Fever ...	6	—	2	4	6	4	2
Other Rise of Temperature	3	3	3	2	2	2	4
Adherent Placenta ...	4	4	3	—	4	3	3
Albuminuria	2	1	—	3	—	1	2
Phlebitis	1	1	1	1	3	2	1
Abortion	5	1	1	1	1	1	1
Contracted Pelvis ...	—		—	—	—		1
Eclampsia	1	—	—	1	3	1	1
Prolapse of Cord ...	1	—	—	1	—	1	1
Induction	—	3			—		—
Miscellaneous	7	7	12	11	10	9	6
TOTAL ...	100	88	88	81	73	74	64
CHILD —							
Discharging Eyes ...	9	16	10	11	8	8	10
Debility, Feebleness, etc.	4	13	9	5	12	9	8
Prematurity	11	4	5	6	4	5	6
Malformations ...	5	7	2	4	4	4	2
Convulsions and Fits	—	1	1	1	—	1	2
Suffocation	—			—	—	—	1
Hæmorrhages (various)	2	1	2	4	4	2	—
Miscellaneous	9	4	8	8	7	6	3
TOTAL ...	40	46	37	39	39	35	32

ASSISTANCE SCHEMES IN CONNECTION WITH MATERNITY WELFARE.

The four main sections in the Scheme are : (a) Milk and Milk Foods to expectant and nursing mothers; (b) Provision of Maternity Home Accommodation at reduced fees; (c) Help towards the payment of the fees of Medical Practitioners called in by Midwives under the Midwives Act; (d) Provision of Dental treatment and Dentures.

(a) MILK SUPPLY.

The following Table shows the number of mothers and the quantity of milk supplied during 1933, together with the figures for the three previous years :—

Year.	Mothers.			Pints of Milk.		
	Expectant.	Nursing.	Total.	Expectant.	Nursing.	Total.
1930	39	104	143	1,823	10,989	12,812
1931	59	181	240	2,784	21,744	24,528
1932	101	272	373	4,991	26,971	31,962
1933	107	273	380	5,093	27,280	32,373

(b) MATERNITY HOME FEES.

164 women out of a total of 208 were admitted to the Ipswich Maternity Home at reduced fees. This represents 79% of assisted cases in 1933, as compared with 85% in 1932, 73% in 1931, and 59% in 1930.

The full fee is 9/- per day, but women were admitted at varying rates as under :—

8/-	... 4	5/6	... 6	3/6	... 10	1/6	... 2
7/-	... 11	5/-	... 27	3/-	... 5	1/-	... 1
6/6	... 10	4/6	... 18	2/6	... 3	Free	... 1
6/-	... 33	4/-	... 28	2/-	... 5		

The same procedure was followed as in previous years, and the charges fixed in accordance with an income scale.

(c) DOCTORS' FEES.

The midwives found it necessary to call in medical assistance at 136 confinements for 140 causes. Accounts were received from Medical Practitioners in 109 of these cases.

The amount paid by the Local Authority was £142 0s. 0d., as compared with £133 10s. 0d. in 1932. In 77 or 70% of these cases the fee has been settled in full, the amount recovered being £87 4s. 0d., a much higher percentage than in the previous year.

Twenty-five or 22% desired to pay by instalments, and the sum received to date totals £23 4s. 6d.

In 9 cases the fee due has been written off on account of poverty.

To date, therefore, £110 8s. 6d. or 77% of the cost under this heading has been recovered. The amount recovered in 1932 was 60%.

(d) DENTAL TREATMENT.

DENTAL WORK IN CONNECTION WITH MATERNITY WELFARE.

Mr. T. A. Edmondson, the Dental Surgeon, reports as follows :—

ANTE- AND POST-NATAL.

I beg to report on the dental treatment of Maternity Cases for the year ending December 31st, 1933. There are two classes, viz., Ante-Natal and Post-Natal.

The work done is detailed as follows :—

	Ante-Natal.	Post-Natal.	Total.
Number of mouths examined	197	69	266
,, having one or more septic teeth ...	185	62	247
,, advised to have treatment	195	68	263
,, actually treated at Clinic	122	47	169
,, of attendances made	436	362	798
,, ,, teeth extracted	722	347	1069
,, ,. Nitrous Oxide administrations ...	162	59	221
,, ,, Amalgam fillings	43	27	70
,, ,, Amalgam and cement fillings ...	51	26	77
,, ,, cement fillings	19	15	34
,, ,, fillings (total)	113	68	181
,, ,, teeth filled	99	60	159
,, ,, sundry dressings	686	223	909

It will be noticed that of the Ante-Natal cases advised treatment 62.56% actually accepted treatment, whilst 69.11% Post-Natals were treated. Twelve of the Post-Natal cases were treated as Ante-Natal cases in a previous year.

Attention is drawn to the fact that 37.5% of pregnant women refuse to accept treatment in spite of all persuasion. In most cases this is owing to a fear that dental treatment may cause miscarriage.

Experts are agreed as to its possibility during the first four months, therefore we always tell these women that they need not have the slightest fear of a dental operation after the fourth month has passed. The refusers usually end the interview by saying that they will leave it until after the confinement, or that they will talk it over with their husbands. The mouths of some of these women are in an appalling state of oral sepsis. One shudders to think of the consequences to the unborn child and the danger to the mother herself, as aseptic condition of the teeth may be associated with puerperal sepsis.

Dentures were supplied in 49 cases, 34 Ante-Natal and 15 Post-Natal. In the case of people who are unable to pay the full amount for the provision of dentures the Public Health Committee is prepared to pay an agreed proportion.

I wish to record the loyal co-operation of my colleagues, Mr. A. W. T. Ward and Mr. R. Cuthill, both of whom now take an equal share with me in the work.

(Signed) T. A. EDMONDSON,
Dental Surgeon.

CHILD WELFARE.

The following is a Summary of the Home Visits since 1921 :—

HOME VISITS BY HEALTH VISITORS.

Year.	Expectant Mothers.	Children.		
		—1	1—5	Total.
Average				
1921—1925	14	2,090	1,910	4,000
1926—1930	35	1,596	3,012	4,608
1926	18	1,643	2,149	3,792
1927	6	1,477	2,094	3,571
1928	20	1,621	4,432	6,053
1929	55	1,590	3,384	4,974
1930	75	1,647	3,004	4,651
1931	61	2,965	5,992	8,957
1932	69	3,721	6,326	10,047
1933	65	3,403	6,182	9,585

The figures are slightly lower than in the previous year, but the absence of one of the Health Visitors for a prolonged period accounts for the small number of visits.

In addition the Health Visitors paid visits under the following headings :—

To Midwives	27
,, Cases in which Midwives had summoned Medical assistance	50
,, Cases notified as suffering from Puerperal Fever, Ophthalmia Neonatorum, etc.	36
,, Stillbirths	52
,, Miscellaneous Visits	1836

878 visits were paid by members of the staff to homes in connection with fees relating to Medical assistance and the Maternity Home.

WORK OF THE INFANT CLINIC.

Under the supervision of the Health Visitors—Every Week-day afternoon except Saturday, 2.30 p.m., Elm Street.

The following is a summary of the visits paid to the Infant Welfare Centres since 1921 :—

Year.	Infants —1.	Children 1—5.	Total.
Average			
1921—1925	7,502	3,013	10,515
1926—1930	8,711	3,833	12,544
1926	7,428	3,083	10,511
1927	7,076	3,206	10,282
1928	9,144	4,079	13,223
1929	10,063	4,454	14,515
1930	9,846	4,345	14,191
1931	11,684	5,871	17,555
1932	10,996	5,902	16,898
1933	11,231	5,587	16,818

(The Branch Clinic figures are included.)

The following Table shows the number of visits paid to the Nacton Clinic :—

BRANCH CLINIC (Nacton Estate).

Under the supervision of the Health Visitors—Every Tuesday afternoon at 2.30 p.m., Red Triangle Hut.

Year.	Infants -1.	Children 1-5	Total.
1929	1,243	481	1,724
1930	1,916	596	2,512
1931	2,660	1,263	3,923
1932	2,615	1,615	4,230
1933	3,175	1,657	4,832

EXAMINATION OF INFANTS BY MEDICAL OFFICER.

Under the Personal Supervision of the Assistant Medical Officer
(Dr. Doris E. P. Jolly).

Infants—Monday and Thursday, 2.30 p.m., Elm Street.
,, Tuesday, 2.30 p.m., Red Triangle Hut, Nacton Estate.

The infants examined by the Medical Officer during 1933 are classified in the following Table according to age groups :—

Age.	No. of Infants Examined.	No. of Re-Examinations.	Total 1933	1932.	Average 1926 - 1930.
-1	859	2,219	3,078	3,205	1,645
-2	233	506	739	857	445
-3	172	280	452	462	217
-4	131	150	281	267	161
-5	100	101	201	232	117
Total	1,495	3,256	4,751	5,023	2,585

REPORT BY THE MEDICAL OFFICER IN CHARGE OF THE INFANT WELFARE CENTRE.

The number of infant visits to the centres in 1933 showed a slight increase, in spite of a smaller birth-rate, but the toddler group attendances were less. Transport undoubtedly forms a problem with this group. They are too small to walk far and too heavy to be pushed far in prams, therefore the only methods of adequately supervising these children are either frequent home visits or the establishment of outlying clinics. The steadily increasing attendance at the one branch clinic already in existence suggests that the latter would be fully utilised.

The type of consultation and advice required has perhaps changed to some extent in 10 years. Very few mothers these days seem ignorant of the value of cleanliness, fresh air and sunlight, though the amount of benefit their children are allowed to gain from them still varies with the energy and intelligence of the mother. On the other hand, a vast amount of educational work still remains to be done in matters concerned with nutrition, avoidance of infections, and particularly perhaps with wider appreciation of the fact that the mind of the growing child needs at least as much care as the body if the development of both are to proceed on normal, healthy lines.

ARTIFICIAL LIGHT CLINIC.

Artificial Light Clinic—Monday, Tuesday, Thursday and Friday, 2.30 p.m., Elm Street.

The figures in the appended Table show the number of children who attended :—

Age.	No of Children Treated.	Number of Re-Visits.	Total 1933.	1932.	1931.	1930.
— 1	17	156	173	441	345	299
— 2	27	380	407	601	393	389
— 3	19	190	209	259	199	163
— 4	8	215	223	124	194	192
— 5	13	130	143	241	226	132
Total	84	1,071	1,155	1,666	1,357	1,175
School Children	98	1,561	1,659	2,802	3,086	2,509
Grand Total ...	182	2,632	2,814	4,468	4,443	3,684

The following Table shows the defects of the children referred to the Sunlight Clinic :—

Defect.	— 5 years.	+ 5 years.	Total
Subnormal Nutrition ...	11	8	19
Pretubercular Debility ...	1	—	1
Enlarged Glands (Neck) ...	4	6	10
Rachitic & Prerachitic ...	8	—	8
Tuberculous Affections :—			
Cervical Glands ...	4	5	9
Abdominal ...	—	—	—
Bones & Joints ...	—	—	—
Lupus	—	—	—
Convalescence following Infectious Diseases ...	—	—	—
Catarrhal and Bronchial Infections	4	2	6
Anæmia, Debility and Marasmus	17	40	57
Unclassified	4	4	8
TOTAL ALL FORMS ...	53	65	118

The work of the artificial light clinic continued on the usual lines in 1933. The number of cases referred for treatment both amongst infants and school children decreased, probably owing to the exceptionally large amount of natural sunlight available during the year.

The repeated requests received from parents for further or annual courses of treatment shows that the tonic effect on many children is marked, while to infants who are failing to gain weight in spite of an apparently suitable and adequate diet artificial light treatment frequently seems to supply just that necessary stimulus to start the weight curve in the right direction.

OPHTHALMIA NEONATORUM.

Nine cases were notified in 1933, as compared with 13 in the previous year.

Four cases were treated at home by medical practitioners, with the nursing assistance of the nurses belonging to the Public Health Department and the Ipswich Nurses' Home.

Of the other cases two were admitted to the East Suffolk and Ipswich Hospital, and three were treated in the Ipswich Maternity Home.

The following Table gives the result of treatment :—

Recovery without impairment of vision ...	9
Marked of impairment of both eyes ...	—
Died	—
Removed from District and lost sight of ...	—
	9

INFANT LIFE PROTECTION.

At the beginning of 1933 there were 56 Foster-Mothers and 63 children on the Register, whilst at the end of the year there remained 65 Foster-Mothers and 82 children.

The Children and Young Persons Act, 1932, which came into force on the 1st January, 1933, brought in a group of children between 7 and 9 years of age, as that Act now provides for the supervision of foster-children up to 9 years of age.

The Health Visitors paid 144 visits to children under 5 years of age and 152 to children over 5 years.

Two applications to receive children were refused, and in addition, one home for temporary reception was not approved.

ASSISTANCE SCHEMES IN CONNECTION WITH CHILD WELFARE.

The main sections of the schemes are :—(a) Milk and Milk Foods for Infants; (b) Provision of Dental Treatment.

(a) MILK AND MILK FOODS.

The following Table shows the number of Infants and the quantity of Milk or Milk Foods supplied during 1933, together with the figures for the three previous years :—

Year.	Infants.	Cows Milk.	Dried Milk.		Total Pints of Milk.
		Pints.	Lbs.	Pints.	
1930	65	829	760 or	4,140	4,969
1931	88	635	989 or	5,687	6,322
1932	106	760	1,022 or	5,876	6,636
1933	98	963	1,198 or	6,888	7,851

(b) DENTAL TREATMENT.

DENTAL WORK IN CONNECTION WITH INFANT WELFARE.

Mr. Edmondson reports as follows :—	Males.	Females.	Total.
Number of cases inspected at Clinic ...	203	176	379
,, having septic conditions of the mouth	180	143	323
Actual number of cases treated at Clinic ...	190	156	346
Number of attendances	300	226	526
,, ,, temporary teeth extracted ...	463	324	787
,, ,, Local Anæsthetic cases ...	28	10	38
,, ,, Nitrous Oxide administrations	209	154	363
,, ,, fillings	75	65	140
,, ,, sundry dressings	58	3	61
,, ,, to whom advice was given, treatment not being necessary	9	14	23

The ages of the children treated ranged from 1 to 5 years, as follows :—1 year, 5; 2 years, 15; 3 years, 114; 4 years, 212.

Regarding the 140 fillings, these were mostly inserted in the temporary molars, which are not replaced by permanent teeth until about the age of ten and eleven years. These teeth, which if not filled would eventually become septic and require extraction, are by filling made sound and efficient for mastication until the permanent bicuspids are ready to take their place.

An Ideal Public Dental Service would make perfect the teeth of the expectant mother; advise the mother as regards the feeding of baby and care of its teeth when they begin to appear, and from the age of two years inspect the child's teeth once every three months. Thus decay could be detected in its earliest stages and promptly stopped by filling, so that the teeth would not be allowed to become septic, with bad results to health, resulting in extraction with loss of usefulness, but would be preserved as a perfect masticating apparatus.

(Signed) T. A. EDMONDSON,
Dental Surgeon.

IPSWICH ISOLATION HOSPITAL.

The appended Table shows the total numbers admitted to, and treated at, the Hospital since 1901 :—

Year	Admissions.	Total Treated.
Annual Average 1901—1910	176	202
,, 1911—1920	574	634
,, 1921—1930	490	561
,, 1921—1925	423	484
,, 1926—1930	557	639
1931	1,068	1,200
1932	783	944
1933	647	744

Thus, the number of admissions to the Hospital declined still further in the year under review.

Patients were admitted to the Hospital from the under-mentioned Authorities :—

Authority.	Infectious Diseases.	Tuberculosis.	Total.
Ipswich	430	56	486
County Councils			
East Suffolk	4	7	11
London	1	—	1
Norfolk		1	1
Urban District Councils			
Aldeburgh	1	—	1
Felixstowe	17		17
Hadleigh	2		2
Halesworth	1	—	1
Harwich	2	—	2
Saxmundham	1		1
Woodbridge	1		1
Rural District Councils			
Blything	10		10
Bosmere & Claydon ...	16		16
Cosford	10		10
East Stow	1		1
Hartismere	1		1
Hoxne	3		3
Mildenhall	2		2
Plomesgate	13		13
Samford	56		56
Woodbridge	6		6
Other Authorities			
Royal Air Force, Felixstowe	1		1
,, ,, ,, Martlesham	1		1
Private O.B. Cases ...	2		2
Port Sanitary Authority ..	1		1
TOTAL	583	61	647

Three-quarters of the total admissions came from Ipswich.

I draw attention to the case of Samford, which provided roughly one-third of the total outside patients. This district, in consequence of its proximity and commercial relations with Ipswich is of definite epidemiological significance to the Borough. It is no longer possible to consider infections in terms of isolated communities.

ISOLATION HOSPITAL.

ACCOMMODATION.

Table giving the number of admissions and Patient Days for Ipswich and Outside Borough Patients (Infectious Diseases only):—

Year.	Admissions.				Patient Days.				Average Weekly number under treatment.
	Ipswich.	"Outside" Patients.	Total.	% of Outside Patients.	Ipswich.	"Outside" Patients	Total.	% of Outside days.	
1929	528	123	651	18.9	18,609	4,448	23,057	19.3	74
1930	535	124	659	18.8	19,002	4,931	23,933	20.6	77
1931	902	145	1047	13.8	36,308	5,617	41,925	13.4	135
1932	590	139	729	19.0	26,644	6,113	32,757	18.7	103
1933	430	153	583	26.2	17,026	6,184	23,210	26.6	73

From this it appears that the decline in admissions in 1933 applied to Ipswich only, the outside patients being more numerous than usual.

In last year's Report I drew attention to the question of the accommodation at the Isolation Hospital, and indicated that the time has come for serious consideration of the increasing needs of the Borough and neighbourhood. It is many years since any extensions were made, and in the intervening period there have been large increases in the population and a considerable extension in the varieties of disease dealt with.

The following Table gives the usual details as to admissions, etc. :—

Disease		Average 1921—1925	Average 1926—1930	1932	1933
INFECTIOUS DISEASES	No. in Hospital Jan 1st	41	47	161	57
	Admissions ...	357	475	729	583
	Total Treated ...	398	522	890	640
	No discharged ...	349	444	912	521
	,, of deaths ...	16	21	21	27
	,, Remaining Dec 31st	33	57	57	92
TUBERCULOSIS	No. in Hospital Jan 1st	18	21	—	19
	Admissions ...	66	57	35	48
	Total Treated ...	84	78	35	67
	No Discharged ...	46	28	8	32
	,, of Deaths ...	18	28	8	18
	,, Remaining Dec 31st	20	22	19	17
SURGICAL TUBERCULOSIS	No. in Hospital Jan 1st	—	14		19
	Admissions ...	—	25	19	16
	Total Treated ...	—	39	19	35
	No Discharged ...	—	21		24
	,, of Deaths ...		3	—	3
	,, Remaining Dec 31st		15	19	8
TOTAL	No in Hospital Jan 1st	59	82	161	95
	Admissions ...	423	557	783	647
	Total Treated ..	482	639	944	742
	No Discharged ...	395	493	820	577
	,, of Deaths ...	34	52	29	48
	,, Remaining Dec 31st	53	94	95	117

This Table shows that the accommodation available was not taxed to the extent of the two previous years.

Table showing the principal Diseases admitted to the Isolation Hospital, together with the fatalities attached to each :—

Diseases	No. of Cases Admitted			Deaths			Case Fatality per cent.
	Ipswich	Other Districts	Total	Ipswich	Other Districts	Total	
Scarlet Fever ...	177	115	292	—	1	1	0.34
Diphtheria ...	107	9	116	8	2	10	8.62
Other Throat, etc. Diseases—							
+ Contacts, etc.	23	—	23	—	—	—	—
Tonsillitis ...	15	6	21	—	—	—	—
Pneumonia ...	19	1	20	3	—	3	15.0
Erysipelas ...	12	5	17	1	1	2	11.6
Measles	15	1	16	—	—	—	—
Puerperal Fever ...	10	1	11	—	1	1	9.09
Do. Pyrexia ...	1	—	1	—	—	—	—
Enteric Group ...	—	9	9	—	2	2	22.2
Pertussis	6	—	6	2	—	2	33.3
Influenza ...	5	1	6	1	—	1	16.6
Pharyngitis ...	3	—	3	—	—	—	—
Laryngitis ...	1	1	2	—	—	—	—
Br. Catarrh ...	2	—	2	—	—	—	—
Surgical Scarlet ...	2	—	2	—	—	—	—
Adenitis ...	2	—	2	—	—	—	—
Chicken Pox ...	1	—	1	—	—	—	—
Mumps	—	1	1	—	—	—	—
Encephalitis Lethargica ...	1	—	1	1	—	1	100
Miscellaneous Group	8	2	10	3	—	3	33.3
Nils, Queries, etc. ...	20	1	21	—	—	—	—
TOTAL ... (Infectious Group)	430	153	583	19	7	26	4.46
Tuberculosis							
Pulmonary ...	42	6	48	15	3	18	37.5
Other Forms ...	14	2	16	2	1	3	18.7
GRAND TOTAL ...	486	161	647	36	11	47	7.26

This Table shows that whilst the principal cases receiving isolation in Hospital are either Scarlet Fever or Diphtheria, the uses of the Institution are by no means confined to these two diseases.

A great deal of very valuable work is done in the Institution in other diseases, particularly Puerperal Sepsis.

In another part of this Report, reference is made to the continued endemic prevalence of Scarlet Fever and Diphtheria, and the statement will be found that in spite of a long continued and successful scheme of hospitalisation, neither disease shows any evidence of being brought under control.

The failure of hospitalisation to control epidemics of the Naso-pharyngeal Group of Infections, viz., Scarlet Fever, Diphtheria, Measles, Whooping Cough, etc., must be admitted, but I do not agree with the school of thought which holds that the practise should be relaxed.

Whilst it is perfectly true that the cases of the disease are only part of the epidemic, they are still part of the epidemic, and a dangerous part, to all susceptible persons coming in contact with them, especially members of their own family.

If we give up the idea that we can control Scarlet Fever or Diphtheria by hospitalisation, we are still justified in holding the view that the practise limits the extent of the Epidemic, which is in itself sufficient justification.

In the case of Diphtheria, hospitalisation is called for in the interests of the patient himself, since it renders available skilled medical opinion and trained nursing, both of which are essential to the successful treatment of this dangerous disease. From this point of view there should be no relaxation.

The case of Scarlet Fever is not so strong as that of Diphtheria in this particular instance, since the type of the disease at present in this locality is so mild as to require very little specific treatment.

Nevertheless, Scarlet Fever is one of the most treacherous of the Infections, and its complications are so numerous and so disturbing when they do occur, that hospitalisation is called for in the vast majority of cases in the interests of the patient. But, and it is a big but, there is no doubt of the injurious effects of crowding Scarlet Fever Wards.

SMALLPOX HOSPITAL.

This Hospital was not opened in 1933.

It has been maintained in a condition of readiness for opening at an hour's notice.

HEATHFIELDS MUNICIPAL HOSPITAL.

On the 1st January, 1933, there were 250 patients in the Hospital (140 males and 110 females).

During the year ended 31st December, 1933, 720 cases were admitted (398 males and 322 females), as compared with 869 cases (485 males and 384 females) for the previous year.

The total number treated during the year was thus 970 persons (538 males and 432 females).

Of these 559 persons (337 males and 222 females) were discharged from the Institution, and 166 died (75 males and 91 females), the corresponding figures for last year being 706 persons discharged and 187 persons died.

The total number of persons remaining in the Institution on 31st December, 1933, was 245 (126 males and 119 females).

The duration of stay of the 725 persons who were either discharged from, or who died in, the Institution was as follows :—

(a) Four weeks or less	411
(b) Exceeding four weeks, but under 13 weeks ...	174
(c) Exceeding 13 weeks	140

The types of cases admitted are indicated briefly in the following rough classification of some of the principal diseases or groups of diseases dealt with :—

Types of Cases.	Nos. Admitted.		
	1931	1932	1933
Dementia	44	32	53
Senile Dementia	13	4	4
Epilepsy	7	23	24
Other diseases of nervous system ...	48	54	75
Heart diseases	43	54	85
Senile decay	31	41	20
Diseases of skin	44	42	23
Bronchitis	25	42	38
Cancer	19	45	43
Tuberculosis	42	32	16
Maternity	14	19	19
Violence	17	38	26

The age distribution of the admissions was as follows :—

Age Periods.	No. Admitted.		
	1931	1932	1933
Under 1 year ...	38	45	51
1—25 years ...	60	102	92
25—45 ,, ...	107	209	169
45—65 ,, ...	127	258	183
65—85 ,, ...	181	237	210
Over 85 ,, ...	17	18	15
Total ...	530	869	720

This summary indicates sufficiently clearly the types of cases making use of the Municipal Hospital.

AMBULANCE SERVICE.

The appended Table indicates the journeys and mileage run during 1933, as compared with the previous year, and the average of the four years 1928-1931.

SERVICE		Average 1928–1931 (inclusive).	1932	1933
AMBULANCE				
Ipswich ...	Journeys	544	535	395
	Miles ...	2404	2297	1753
Out of Borough ...	Journeys	97	111	123
	Miles ...	2918	2734	3325
Total ...	Journeys	641	646	518
	Miles ...	5322	5031	5078
BEDDING VANS				
Collection of Bedding	Journeys	237	264	216
	Miles ...	1691	1734	1660
Return of Bedding	Journeys	113	111	81
	Miles ...	995	906	721
Collection of Meat	Journeys	96	85	78
	Miles ...	658	391	358
Port Work Pin Mill	Journeys	7	1	—
	Miles ...	130	20	—
Small Pox Hospital	Journeys	11	—	—
	Miles ...	61	—	
Other Journeys	Journeys	95	113	118
	Miles ...	1112	1149	1231
Total ...	Journeys	559	574	493
	Miles ...	4647	4200	3970

The Motor Ambulance and Bedding Van were brought into use on January 1st, 1928, and have thus completed six years of useful service.

The total journeys and mileage run are given below:—

	Journeys.	Miles.
Ambulance	3,729	31,400
Bedding Van	3,303	26,723
	7,032	58,123

LABORATORY.

The work carried out in the Laboratory of this Department since 1921 is as follows:—

	SWABS from Cases of Diphtheria or Suspected Diphtheria.			SPUTA from Actual or Suspected Cases of Tuberculosis.		
Year.	Examined.	Positive.	Per cent. Positive.	Examined	Positive.	Per cent. Positive.
Average 1921-25	1,260	240	19%	218	52	24%
1926-30	1,560	239	15%	236	68	29%
1926	516	89	17%	173	42	24%
1927	465	52	11%	187	58	31%
1928	1,537	247	16%	228	65	28%
1929	2,200	372	17%	339	79	23%
1930	3,081	437	14%	252	95	37%
1931	5,023	793	16%	232	52	22%
1932	4,847	679	14%	234	62	26%
1933	3,171	285	9%	312	85	27%

1,530 Urines were examined in connection with the Ante-Natal Clinic, with the following results:—

Albumen, trace	49
Albumen, cloud	8
Sugar	38
Pus	1

Examinations carried out at other Laboratories on behalf of the Local Authority during 1933 were as follows:—

Widals (Typhoid and Para. A and B) ...	10
Urines	10
Fæces	11
Virulence Test K.L.B.	16
Bacterial Count Milk	12
Water Analyses	31
Sputum (for T.B.)	1
Animal Inoculation (Milk for T.B.) ...	2

In addition, under the V.D. Scheme, the following specimens were examined at the East Suffolk County Laboratory:—

	East Suffolk Hospital Clinic.	Private Practitioners.
For Gonococci	—	18
For Wasserman Reaction ...	61	100
Cultural Test for Gonoccoccus	82	—
Cerebro Spinal Fluid for ..	—	5

The total cost of this service was £109 8s. 2d.

HEALTH EDUCATION.

The propaganda work in connection with Health Education was again curtailed in 1933 by the absence of the usual "Health Week."

The Public Health Committee, however, continued the distribution throughout the year of the monthly journal, "Better Health."

5,000 copies of this booklet are printed each month, and a copy is delivered free to any householder in Ipswich who cares to apply for a copy.

In addition, each school and Library receives copies for free distribution.

Towards the end of the year the Empire Marketing Board offered six of their large Poster Frames to the Corporation, and these have been taken over by this Department.

Arrangements have been entered into with the Central Council for Health Education for a supply of suitable posters each month, and these form a very useful adjunct to the propaganda work of the Public Health Committee.

VACCINATION.

The Vaccination Scheme was carried out on similar lines to the previous year, and there was no change in personnel.

The figures in the following Table are supplied by the Vaccination Officers :—

	Ipswich Eastern.		Ipswich Western		Ipswich	
	Nos	Per cent	Nos.	Per cent	Nos.	Per cent.
No. of Children Registered during 1933	698		650		1348	
Cases Vaccinated	100	14.3	135	20.8	235	17.4
No of objections to Vaccination	551	79.0	469	72.1	1020	75.7
No of Infants insusceptible ...	2	6.7	2	7.1	4	6.9
No of Infants who died unvaccinated	30		19		49	
No of Children who left the district	10		15		25	
Postponed or cases in the hands of the Public Vaccinator ...	5		10		15	

The percentage of children vaccinated in 1932 was 18.9%, and in 1931 the figure was 13.7%.

VENEREAL DISEASES.

REPORT RELATING TO ALL PERSONS WHO WERE TREATED AT THE TREATMENT CENTRE AT IPSWICH DURING THE YEAR ENDING DECEMBER 31ST, 1933.

By Dr. F. Fowler Ward

(Medical Officer in Charge, Venereal Diseases Clinic).

The number of cases treated in 1933 were :—	Males.	Females.	Persons.
Gonorrhœa	96	40	136
Syphilis	78	59	137
Soft Chancre	1	—	1
Other conditions	45	26	71
Total 1933	**220**	**125**	**345**
Total 1932	239	120	359
,, 1931	240	131	371
,, 1930	264	138	402
,, 1929	275	138	413

This Table shows a steady decrease in the number of new cases.

The number of cases dealt with *for the first time* during the years 1929-1933 are given below classified according to residence :—

Year.	Ipswich.	East Suffolk.	West Suffolk.	Essex.	Total.
1929	136	83	3	17	239
1930	145	64	6	14	229
1931	129	63	2	16	210
1932	128	64	1	13	206
1933	113	67	4	10	194

This Table also indicates a small but steady fall.

OUT-PATIENT ATTENDANCES.

(a) For individual attention by Medical Officer.

	Males.	Females.	Persons.
Gonorrhœa	1,000	307	1,307
Syphilis	622	540	1,162
Soft Chancre	9	—	9
Other conditions	57	117	174
Total 1933	**1,688**	**964**	**2,652**
Total 1932	1,539	782	2,321
,, 1931	1,668	724	2,392
,, 1930	1,620	1,078	2,698
,, 1929	1,661	774	2,435

The number of male attendances for the treatment of Gonorrhœa was greater than in 1932, although the number of new cases was less.

(b) For intermediate treatment (irrigation, dressing, etc.).

	Males.	Females.	Persons.
Gonorrhœa	4,293	654	4,947
Total 1931 ...	3,203	735	3,938
,, 1930 ...	2,773	454	3,227
,, 1929 ...	2,172	454	2,626

A marked increase in number of attendances is a result of the more intensive treatment which could be carried out by reason of unemployment among the cases treated.

(c) Total.

	Males.	Females.	Persons
Gonorrhœa	5,293	961	6,254
Syphilis	622	540	1,162
Soft Chancre	9	—	9
Other conditions ...	57	117	174
Total 1933 ...	**5,981**	**1,618**	**7,599**
Total 1932 ...	4,441	1,345	5,786
,, 1931 ...	4,871	1,459	6,330
,, 1930 ...	4,393	1,532	5,925
,, 1929 ...	3,833	1,230	5,063

Total number of attendances of all patients residing in each area :—

Year.	**Ipswich.**	East Suffolk.	West Suffolk.	Essex.	Total.
1929	**3,829**	1,131	20	83	5,063
1930	**4,641**	901	193	190	5,925
1931	**5,042**	1,053	38	197	6,330
1932	**4,653**	992	25	116	5,786
1933	**6,499**	926	61	113	7,599

It will be seen that the increase in the number of attendances was from Ipswich cases only.

IN-PATIENT DAYS.

Number of Patients and aggregate number of "In-patient days" of treatment :—

	Males.		Females.		Persons.	
	Patients	Days.	Patients.	Days.	Patients.	Days.
Syphilis	—	—	—	—	—	—
Gonorrhœa ...	6	70	6	214	12	284
Soft Chancre ...	—	—	—	—	—	—
Other conditions ...	2	5	1	8	3	13
Total 1933 ...	**8**	**75**	**7**	**222**	**15**	**297**
Total 1932 ...	8	90	10	413	18	503
,, 1931 ...	5	38	11	215	16	253
,, 1930 ...	8	135	4	70	12	205
,, 1929 ...	9	118	8	190	17	308

The figures for 1933 were a little below the average of the four preceding years.

The following Table shows the "In-Patient days" classified according to areas :—

Year.	**Ipswich.**	East Suffolk.	West Suffolk.	Essex.	Total.
1929	**104**	204	—	—	308
1930	**98**	69	22	16	205
1931	**151**	61	—	41	253
1932	**242**	222	21	18	503
1933	**87**	194	—	16	297

The decrease in the number of "In-patient" days, as compared with 1932, was accounted for chiefly by Ipswich patients.

EXAMINATION OF PATHOLOGICAL MATERIAL AND NUMBER OF DOSES OF ARSENOBENZENE COMPOUNDS GIVEN.

ear	Specimens Examined by Medical Officer at Centre.		Specimens Examined by an Approved Laboratory.		No. of doses of Arsenobenzene Compounds.				
	Spirochaetes	Gonococci	Wassermanns	Gonococci	Ipswich	East Suffolk	West Suffolk	Essex	Total
929	4	150	148	110	287	287	5	25	604
930	12	213	173	106	128	75	6	26	235
931	9	209	165	129	197	159	6	68	430
932	3	187	144	78	253	147	8	54	462
933	8	193	120	101	241	83	25	59	408

(Signed) F. FOWLER WARD,
Medical Officer in Charge of Centre.

WATER SUPPLY.

The following is the return of the approximate amounts of water supplied from the various sources during 1933 :—

	Gallons.
Total Water from Wells in Waterworks Street ...	370,158,000
Total Water from Wells at Whitton	539,148,000
Total Water from Gravitation Sources (Holywells) ...	11,600,000
Total Supply, all sources	920,906,000

	Gallons.
Supply, per head, per day, including Trades ...	28.3
,, ,, ,, ,, ,, 1932	26.0
,, ,, ,, ,, ,, 1931 ...	25.5
,, ,, ,, ,, ,, 1930	25.0
,, ,, ,, ,, ,, 1929	25.6

I am indebted to Mr. E. McLauchlan, the Borough and Water Engineer, for the figures.

The water is analysed at frequent intervals. No question has ever risen with regard to the purity of the Well Waters.

*This supply was shut off from the Town Supply and turned into lake on August 19th, 1933.

STREET CLEANSING AND COLLECTION AND DISPOSAL OF HOUSE REFUSE.

CLEANSING SUPERINTENDENT'S REPORT.

YEAR	Number of Houses.	Population.	Weight per 1,000 population per day.	Net Expenditure per annum per ton.						Net Expenditure per 1,000 population per annum.			Net Expenditure per 1,000 houses per annum.			Rate in the £.	Street Cleansing.				
				Collection.		Disposal.		Total.		Collection.	Disposal.	Total.	Collection.	Disposal.	Total.		Cost per 1,000 population.		Cost per 10,000 yds. of streets cleansed.		Cost per 1,000 gullies emptied.
			cwts.	s.	d	s.	d.	s.	d.	£	£	£	£	£	£	d.	£	s.	s.	d.	£
1927-28	21688	84140	7.7	12	2	10	3	22	5	86	72	158	360	305	665	7.49	83	8	—		—
1928-29	22404	85990	7.7	11	5	10	3	21	8	81	72	153	334	300	634	7.22	94	6	—		—
1929-30	22986	85800	8.5	12	0	6	10	18	10	91	52	143	339	193	532	6.72	90	5	22	7	—
1930-31	23280	86860	8.4	11	11	7	10	19	9	92	60	152	344	225	569	7.04	89	7	21	3	—
1931-32	23413	87770	8.3	12	2	8	3	20	5	93	66	159	349	247	596	7.30	89	7	21	9	—
1932-33	24115	88700	8.3	11	11	7	6	19	5	92	58	150	338	214	552	6.70	86	16	21	2	47.2
Average for 110 cities and boroughs		—	16.7	9	5	5	4	14	9	139	78	217	643	358	1001	—	—		—		—

From the above Table of comparative costs the following salient points emerge :—

(1) The average net cost per 1,000 population per year for the 110 cities and boroughs is £217, against the Ipswich figure of £150.

(2) The cost for each person per year in Ipswich is 3s., and the corresponding average figure for the 110 cities and boroughs 4s. 4d.

(3) Ipswich refuse is still less than half the average weight, being 6½ lbs. for each person per week, as against an average of over 13 lbs.

(4) Nearly 14,000 tons of refuse were dealt with at the destructor.

(5) The cost per house per annum in Ipswich is 11s. 5d., and the average 20s.

The number of calls made was 1,418,820, an increase of 76,479 over the figure for 1931, when the last addition to the personnel was made. Thus each man is making 39 calls a week more than he did in March, 1931. I fear, however, that we have now reached the limit of output with our present type of vehicle, and proposals have been submitted for the purchase of a more suitable type.

In regard to street cleansing and gully emptying, nine new streets were taken over during the year. The difficulties of this section are largely those connected with the distance of the newer districts from the depot, which makes horse transport a costly system. There is little doubt that in the near future we shall be confronted with the alternatives of district depots, or mechanical scavenging vehicles.

Snow removal cost £284, as against £154 in 1932, and £346 in 1931.

It will be observed that no comparison can be made in respect of gully emptying between the year under review and 1932, as expenditure under this heading was not previously costed separately. Our figure of £47 4s. 0d. per 1,000 gullies emptied gives us a cost of 11.3 pence per gully, which I am confident could be reduced by the substitution of a more up-to-date mode of attack. Such a change is in fact now under consideration.

H. PARISH,
Cleansing Superintendent.

CHIEF SANITARY INSPECTOR'S ANNUAL REPORT, 1933.

Mr. H. L. Baty, Chief Sanitary Inspector, reports as follows :—

Analysis of Inspections.	1933
Private Houses	6,607
House to House	210
Houses let in Lodgings	11
Van Dwellings	24
Common Lodging Houses	45
Houses with reference to application for Council House	43
Damp Houses	18
Overcrowded Houses	11
Verminous Houses	126
Total Inspections of Housing conditions ...	7,095
Slaughter-houses	3,431
Butchers Shops	408
Cowsheds	144
Milk Retailers Premises	403
Bakehouses	255
Ice Cream Premises	39
Restaurant Kitchens	47
Cold Stores	6
Fried Fish Shops	293
Total Inspections with reference to Food ...	5,026
Rivers	37
Refuse Dumps	47
Visits after Infectious Disease	363
Shops	455
Factories, Workshops, &c.	304
Drains	307
Schools	19
Places of Entertainment	46
Public Baths	27
Urinals	60
Offensive Trade Premises	328
Stables	62
Piggeries	15
To Investigate Complaints	1,072
Smoke Nuisances	16
At Port	169
Interviews at Office	654
Total of other Inspections	3,971
Total Inspections made during the year	16,092

Analysis of Work Carried Out.	1933
Drains inspected	307
Drains smoke tested	70
Drains water tested	43
Drains chemical tested	6
Drains reconstructed	28
Drains unblocked and cleansed	27
New Drains provided	11
Ventilating shafts provided	6
Ventilating shafts repaired	3
Gullies fixed	58
New sinks and wastes provided	37
Water-closet flushing apparatus repaired ...	22
Water-closets repaired	17
New water-closet pans provided	25
New water-closets provided	30
Foul water-closets cleansed	2
Inspection chambers provided	21
Inspection chambers repaired	7
Total Drainage works carried out	720
Roofs repaired	50
Eaves-gutters repaired	28
Rain Water Pipes repaired or renewed ...	16
Coppers repaired	19
Dampness remedied	8
Rooms Ventilated	5
Yards re-paved or yard pavings repaired ...	68
Wash houses repaired	13
Sculleries concreted	48
Floors renewed	8
Ash Bins provided	134
General Repairs to Houses .. .	151
Total works carried out to Houses ...	548

Analysis of Work Carried Out—*continued.*	1933
Urinals repaired or cleansed	25
Dirty houses cleansed	8
Pail closets abolished	1
Dead wells abolished	1
Premises limewashed	25
Removal of manure	14
Removal of refuse	6
Removal of animals	4
Total of other works carried out	84
Total works carried out during the year ...	1,352

HOUSING.

1.—Inspection of Dwelling-houses during the year :—

(1) (a) Total number of dwelling-houses inspected for housing defects (under the Public Health or Housing Acts)	6,817
(b) Number of inspections made for the purpose ...	8,840
(2) (a) Number of dwelling-houses (included under sub-head (1) above) which were inspected and recorded under the Housing Consolidated Regulations, 1925	210
(b) Number of Inspections made for the purpose ...	2,023
(3) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	nil.
(4) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation ...	318

2.—Remedy of defects during the year without service of formal Notices :—

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	306

3.—Action under Statutory Powers during the year :—

(a)—Proceedings under Sections 17, 18 and 23 of the Housing Act, 1930 :—

(1) Number of dwelling-houses in respect of which notices were served requiring repairs	nil.
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(a) By owners	nil.
(b) By Local Authority in default of owners ...	nil.

(b)—Proceedings under the Public Health Acts :—

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied ...	318
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	
(a) By owners	46
(b) By Local Authority in default of owners ...	nil.

(c)—Proceedings under Sections 19 and 21 of the Housing Act, 1930 :—

(1) Number of dwelling-houses in respect of which Demolition Orders were made	nil.
(2) Number of dwelling-houses demolished in pursuance of Demolition Orders	nil.

(d)—Proceedings under Section 20 of the Housing Act, 1930 :—

(1) Number of separate tenements or underground rooms in respect of which Closing Orders were made ...	nil.
(2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit ...	nil.

(e)—Proceedings under Section 3 of the Housing Act, 1925 :—

(1) Number of dwelling-houses in respect of which notices became operative requiring repairs	nil.
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(a) By Owners	nil.
(b) By Local Authority in default of owners ...	nil.

(3) Number of dwelling-houses in respect of which Closing Orders became operative in pursuance of declarations by owners of intention to close ... ... nil.

(f)—Proceedings under Sections 11, 14 and 15 of the Housing Act, 1925 :—

(1) Number of dwelling-houses in respect of which Closing Orders became operative ... ... nil.

(2) Number of dwelling-houses in respect of which Closing Orders were determined, the dwelling-houses having been rendered fit ... ... nil.

(3) Number of dwelling-houses in respect of which Demolition Orders became operative ... ... nil.

(4) Number of dwelling-houses demolished in pursuance of Demolition Orders ... ... nil.

WATER SUPPLY.

Samples taken from Corporation Supplies	25
Samples taken from Private Supplies	4
Samples taken of Trade Effluents	6
Samples taken from Rivers	2
Samples taken from Swimming Baths	14

INFECTIOUS DISEASES.

Infectious Diseases enquiries made	363

PROGRESS OF NOTICES.

Preliminary :—	
Served	331
Completed	307
Statutory :—	
Served	70
Completed	46
Verbal :—	
Given	66
Completed	28
Letters Issued	533
Orders of Court of Summary Jurisdiction to abate nuisances	2

FACTORIES AND WORKSHOPS.

Premises Inspected :—

Factories	5
Outworkers	6
Bakehouses	255
Workshops	37
Workplaces	1

SHOPS' ACTS.

Visits	445
New Shops Registered	10
Transfers	1

SALE OF FOOD AND DRUGS.

The following Table shows the number of samples taken :—

Milk	37
Cream	3
Butter	20
Margarine	6
Lard	1
Tea	3
Coffee	4
Cocoa	3
Malt Vinegar	5
White Pepper	2
Cornflour	1
Self-raising Flour	1
Powdered Groats	1
Jam	2
Lemon Cheese	2
Sausage	3
Potted Meat	1
Beef Dripping	1
Tinned Condensed Milk ...	12
Tinned Cream	4
Tinned Fruit	7
Tinned Pilchards	2
Zinc Ointment	1
Sulphur Ointment	1
Glauber's Salts	1
Epsom Salts	1
Glycerine	1
Olive Oil	1
Total ...	127

Four samples of milk, each from the same source, were found deficient in milk-fat to the extent of at least 17%. An "appeal to the cow" sample gave a similar deficiency. The producer was warned and subsequent samples reached the requisite standard.

One purveyor of milk was prosecuted and fined £2 for selling milk which was 41% deficient in milk-fat.

One purveyor of milk was warned for selling milk which was 6% deficient in milk-fat.

One vendor of sausage was prosecuted and fined £2, including 19/- costs, for selling sausages containing boric acid to the extent of 6.92 grains per lb., contrary to the provisions of the Public Health (Preservatives, etc., in Food) Regulations.

DISEASES OF ANIMALS ACTS, 1894-1927.
TUBERCULOSIS ORDER, 1925.

Eight cows were sent in for slaughter by Veterinary Inspectors.

In one case, the carcase and all organs were condemned.

In two cases, the head, tongue and udder were condemned.

In one case, the lungs and udder were condemned.

In four cases, the udders were condemned.

PUBLIC HEALTH (MEAT) REGULATIONS, 1924.

The number of inspections of butchers' shops made during the year was 408.

The number of pigs' carcases marked in accordance with Part III. of the Regulations, during the year, was 526.

SLAUGHTER-HOUSES.

The number of private slaughter-houses in use in the Borough during the year was 15.

The number of visits made to the slaughter-houses during the year was 3,431.

The numbers of carcases examined during the year were :—

Cattle ...	... 4,407
Sheep ...	... 6,302
Pigs ...	... 55,053*
Calves ...	... 549

*The number of pigs examined ante-mortem during the year was 18,085. The large increase over previous years in the number of pigs examined was due to the increased slaughter of pigs at the local bacon factory under the Pigs Marketing Scheme.

Proceedings were instituted on two occasions against slaughtermen for failure to observe the provisions of Bye-laws relating to the stunning of animals before slaughter.

In one case the slaughterman was fined £1 on each of two charges.

In the other case the slaughterman was fined £2.

MILK AND DAIRIES ORDER, 1926.

No. of inspections of Dairies and Milk shops	330
No. of inspections of Purveyors of Milk	73
No. of inspections of Cowsheds	144

One person was prosecuted for carrying on the trade of dairyman without being registered and was fined ten shillings.

The same person was also prosecuted for failing to keep a milk vessel properly covered. This case was dismissed.

The same person was also prosecuted for failing to mark a milk vessel containing separated milk with the words " Separated Milk," and was fined 20 shillings.

FOOD INSPECTION.

The undermentioned foodstuffs were condemned as unfit for human consumption during the year 1933 :—

Carcases of beef	24
Beasts' lungs	154
Beasts' livers	117
Beasts' heads and tongues	119
Beasts' mesenteries	58
Beasts' kidneys	15
Beasts' skirts	10
Beasts' spleens	7
Beasts' tongues	4
Beasts' offals	4
Beasts' tripes	4
Beasts' heads	2
Beasts' intestines	6
Beasts' hearts	4
Cows' udders	7
Forequarters of beef	12
Hindquarters of beef	2
Sides of beef	1
Beef (lbs.)	92
Carcases of mutton	22
Carcases of lamb	1
Lamb (lbs.)	80
Forequarters of mutton	3
Leg of mutton	1
Side of mutton	1
Lambs' livers (lbs.)	10
Sheep's plucks	3
Sheep's mesenteries	1
Sheep's livers	5

Carcases of pork	143
Pork (incl. 4,439 heads)	34 tons 11 cwts. 3 qrs. 21 lbs.
Pigs' heads	5,458
Pigs' kidneys	1,640
Pigs' livers	933
Pigs' plucks	493
Pigs' mesenteries	375
Pigs' spleens	309
Pigs' hocks	39
Pigs' legs	39
Pigs' fore ends	51
Pigs' lungs	99
Pigs' offals	91
Pigs' hearts	12
Pigs' shoulders	7
Pigs' skirts	57
Pigs' intestines	111
Forequarters of pork	7
Hindquarters of pork	6
Carcases of veal	5
Foreleg of veal	1
Veal (lbs.)	4
Calves' heads	2
Calf's pluck	1
Chicken	1
Crabs	160
Skate (lbs.)	32
Rock Salmon (lbs.)	189
Rusks ((lbs.)	1½
Tinned Foods (tins):—	
Fish	430
Fruit	342
Meat	136
Milk	160
Vegetables	15
Tomatoes	8
Prawns	2
Bottled Foods (bottles):—	
Fruit	94
Vegetables	5
Pickles	16
Honey	1
Marmalade	3

RATS AND MICE DESTRUCTION ACT, 1919.

Visits to premises re rat infestations	72

DISINFECTION.

The following table gives the number of rooms, articles of clothing, etc., disinfected, or dealt with, by this Department, during 1933 :—

Infectious diseases :—	
Rooms	367
Bedding	4,481
Tuberculosis :—	
Rooms	177
Bedding	1,319
Vermin :—	
Rooms	232
Bedding	77
Open Air School :—	
Blankets	210
Socks	96
Articles from Isolation Hospital	8,484
Articles destroyed	176
Needlework from Schools	64
Library books	636
Ambulances	74
Taxi	1
Private car	1
Ship's cabin	1
Hospital wards	2
Police cells	2
Scabies baths given	514

SANITARY CONDITIONS OF MUSIC HALLS AND CINEMAS.

Number of visits paid during performances, 46.

In one case the condition of the sanitary conveniences was unsatisfactory, and action was taken to remedy the condition.

MORTUARY.

During the year 1933, 73 bodies were admitted into the Mortuary.

In 45 cases Post-mortem examinations were held.

FACTORIES AND WORKSHOPS, 1933.

1.—Inspection of Factories and Workshops :—

Premises.	Number of Inspections.	Number of Written Notices.	Number of Prosecutions of Occupiers.
Factories ...	5	1	—
Workshops ...	37	—	—
Outworkers ...	6		—
Workplaces ...	1	—	—
Total ...	49	1	—

2.—Defects found in Factories, Workplaces and Workshops, etc :—

Particulars.	Number of Defects. Found.	Number of Defects. Remedied.	Number of Defects. Referred to H.M. Inspector.
Nuisances under the Public Health Acts :—			
Want of Cleanliness ...	9	9	—
Want of Ventilation ...	—	—	—
Overcrowding	—	—	—
Want of Floor Drainage	—	—	—
Other Nuisances ...	1	1	—
Sanitary Accommodation			
(a) Insufficient ...	6	6	
(b) Unsuitable or defective	1	1	—
(c) Sexes not separate ...	—	—	—
Offences under the Factory and Workshop Acts :—			
Other Offences	—	—	
TOTAL	17	17	—

3.—Outwork in Unwholesome Premises, Section 108.

So far as Ipswich is concerned there is nothing to report under th heading.

H. L. BATY,
Chief Sanitary Inspector.

PORT OF IPSWICH SANITARY AUTHORITY. REPORT FOR 1933

I.—Amount of Shipping entering the Port during the year 1933 :—

		No.	Tonnage.	No. Inspected		No. reported to be defective.	No. of vessels on which defects were remedied.	No. of vessels reported as having or having had during the voyage Infectious Disease on board.
				By the Medical Officer of Health.	By the Sanitary Inspector.			
Foreign	Steamers	117	151,332	2	35	7	5	1
	*Motor ...	51	19,866		7	—	—	
	Sailing ...	3	4,075	—	2			
	Fishing ...	—		—		—	—	—
Total Foreign		171	175,273	2	44	7	5	1
Coastwise	Steamers	591	176,631		28	2	1	—
	*Motor ...	380	42,706		3	—		—
	Sailing ...	1,190	75,635	—	52	—	—	
	Fishing ...	—				—		
Total Coastwise		2,161	294,972		83	2	1	—
Total Foreign and Coastwise		2,332	470,245	2	127	9	6	1

* Includes mechanically propelled vessels other than steamers.

II.—Character of Trade of Port :—

(a) Passenger traffic during the year.—Nil.

(b) Cargo Traffic.—Principal imports : Coal, oil, spirits, grain, timber, road stone, sand, shingle, phosphates, fertilisers, feeding stuffs, and ore. Principal exports : Grain, flour, vegetable oils, sugar, oils, spirits, malt, molasses, feeding stuffs, and burnt ore.

(c) Foreign Ports from which vessels arrive : Antwerp (Belgium), Rotterdam (Holland), Hamburg and Stettin (Germany), Dantzig Free State, Kherson and Odessa (Black Sea Ports), White Sea and Baltic Ports, Huelva (Spain), Tunis, Spax and Casa Blanca (North Africa), Abadan (Persian Gulf), Geelong (India), Sydney, Melbourne, Wallaroo and Port Victoria (Australia), Vancouver, Quebec and Montreal (Canada), New Orleans (U.S.A.), Texas Ports, Buenos Aires, Rosario, San Nicholas, Santa Fé, Villa Constitucion (River Plate).

III.—Source of Water Supply :—

(a) For the Port.—Water supply is obtained from the Ipswich Corporation's water mains.

(b) For Shipping.—Shipping in the Dock and at Cliff Quay obtain water from the Ipswich Corporation's water mains. Shipping at the deep water mooring berths in Butterman's Bay use a water boat from Harwich.

(c) Number of water boats and their sanitary condition.—One water boat is used. The sanitary condition is satisfactory.

IV.—Port Sanitary Regulations, 1933 :—

1. Arrangements for dealing with Declarations of Health :—
A Declaration form is handed to the Master of a vessel from a foreign port either by the Pilot, the Customs Officer or the Port Sanitary Inspector, and, when filled in, is returned to the office of the Port Sanitary Authority either by the Customs Officer or the Port Sanitary Inspector.

2. Boarding of vessels on arrival :—
Vessels from foreign ports are boarded by an officer of the Port Sanitary Authority either at the deep water mooring berths at Butterman's Bay, which is situated about six miles down the river, or at Cliff Quay, Ipswich, or at the Ipswich Dock.

3. Notification to the Authority of inward vessels requiring special attention (wireless messages, land signal stations, information from pilots, Customs Officers, etc.) :—
Arrangements have been made with the Customs Officers to notify to the Port Sanitary Authority any inward vessel requiring special attention; also, for wireless messages received by local shipping agents, in accordance with the provisions of Article 6 of the Regulations, to be forwarded to the office of the Port Sanitary Authority.

4. Mooring stations designated under Article 10 : (a) within the docks; (b) outside the docks :—

   (a) The established inner mooring station is situated at Cliff Quay, Ipswich.

   (b) The established outer mooring station is situated at the Anchorage at Butterman's Bay.

5. Particulars of any standing exemptions from the provisions of Article 14 :—
A standing exemption from detention under Article 14 has been granted by the Medical Officer in respect of all unhealthy ships, except those unhealthy on account of cholera, plague, yellow fever, typhus, smallpox or chicken pox.

6. Experience of working of Article 16:—

No difficulty arose during the year in carrying out the restrictions on boarding or leaving a ship arriving from a foreign port.

7. What, if any, arrangements have been made for:—

(a) Premises and waiting rooms for medical examination.

(b) Cleansing and disinfection of ships, persons and clothing and other articles.

(c) Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the Regulations.

(d) Hospital accommodation available for Plague, Cholera, Yellow Fever, Smallpox and other infectious diseases.

(e) Ambulance transport.

(f) Supervision of contacts.

(a) Medical examinations are carried out on board the ship concerned.

(b) On a ship where infectious disease has occurred, disinfection of the infected parts of the ship is carried out by the staff of the Port Sanitary Authority. A cleansing station for persons is established at the office of the Port Sanitary Authority, and further facilities for the cleansing of persons exist at the Ipswich Borough Isolation Hospital and at the Ipswich Smallpox Hospital.

(c) Temporary accommodation is available at the Ipswich Borough Isolation Hospital for persons requiring such accommodation for the purposes of the Regulations.

(d) A smallpox hospital (24 beds) is maintained by the Ipswich Sanitary Authority, and is available for cases of smallpox in the Port. Cases of other infectious diseases are accommodated at the Ipswich Borough Isolation Hospital.

(e) A motor ambulance, and a convertible motor van, are available for transport purposes.

(f) Contacts proceeding to places outside the Borough and Port of Ipswich are notified to the Medical Officer of Health of the district to which they are proceeding. Contacts remaining on the ship are kept under observation daily by an officer of the Port Sanitary Authority.

8. Arrangements for the bacteriological or pathological examination of rats for plague :—
The examination of rats for plague is carried out at the laboratory of the East Suffolk County Council, at Ipswich.

9. Arrangements for other bacteriological or pathological examinations :—
Other bacteriological or pathological examinations are carried out at the Ipswich Public Health Department, the East Suffolk County Council Laboratory, and the East Suffolk and Ipswich Hospital, at Ipswich.

10. Arrangements for the diagnosis and treatment of venereal disease among sailors under international arrangements :—
Diagnosis and treatment are carried out at the Ipswich and East Suffolk Hospital.

11. Arrangements for the interment of dead :—
Nil.

12. Other matters, if any, requiring or receiving attention :—
Nil.

Cases of Infectious Sickness landed from Vessels :—

Disease.	Number of Cases during the year.		No. of Vessels concerned.	Average number of Cases for previous 5 years.
	Passengers.	Crew.		
Suspected Para-typhoid Fever B	—	1	1	—

Cases of Infectious Sickness occurring on Vessels during the voyage, but disposed of prior to arrival :—

Disease.	Number of Cases during the year.		No. of Vessels concerned	Average number of Cases for previous 5 years.
	Passengers.	Crew.		
—	—	—	—	—

V.—MEASURES AGAINST RODENTS.

(1) Steps taken for detection of rodent plague.

(*a*) In ships in the port.

(*b*) On quays, wharves, warehouses, etc., in the vicinity of the port.

(*a*) Ships visited by the Port Sanitary Inspector have enquiry and search made on board for unusual mortality of rats or mice.

(*b*) Premises in the vicinity of the Dock and quays are visited from time to time by the Port Sanitary Inspector and similar enquiries and search are made.

(2) Measures taken to prevent the passage of rats between ships and the shore.

No evidence has been found of rat migration from ship to shore during the year, and special measures, such as rat-guarding mooring ropes, are not taken.

(3) Methods of deratisation of (*a*) Ships, (*b*) Premises, in the vicinity of docks or quays.

(*a*) The Port of Ipswich is not an " approved " port for the purposes of Article 28 of the International Sanitary Convention, 1926. Ships requiring deratisation have therefore to proceed to an " approved " port, the nearest being the ports of London or Dover in the South or the port of Hull and Goole in the North.

(*b*) Deratisation of premises in the vicinity of the Dock and quays is carried out by the occupier of the premises concerned, the usual method being the use of traps and poisoned baits.

(4) Measures taken for the detection of rat prevalence in ships and on shore.

The usual inspections are made by the Port Sanitary Inspector. It has not been found necessary to take special measures, such as the employment of a full-time rat-catcher.

(5) Rat-proofing.

(*a*) To what extent are docks, wharves, warehouses, etc., rat proof?

(*b*) Action taken to extend rat-proofing.

(i) In ships; (ii) on shore.

(*a*) Many of the buildings, etc., in the vicinity of the Dock and quays are very old and are not considered rat-proof. Recently-erected buildings are designed with rat-proofing in mind and are more satisfactory.

(*b*) Advice is given by the Port Sanitary Inspector to the person concerned where evidence is found of the necessity of extension of rat-proofing of either ships or buildings.

RATS DESTROYED DURING THE YEAR.

(1) On Vessels, (2) in Docks, Quays, Wharves and Warehouses.

An Official Rat-Catcher is not employed by the Ipswich Port Sanitary Authority, and the numbers and species of rats destroyed by the occupiers of the vessels and buildings in the Port are not known.

Measures of Rat Destruction on Plague "infected" or "suspected" Vessels or Vessels from plague infected ports arriving in the Port during the year.

No such vessel arrived in the Port of Ipswich during the **year.**

VI.—HYGIENE OF CREWS' SPACES.

Classification of Nuisances.

Nationality of Vessel.	No. Inspected during the year.	Defects of original construction.	Structural defects through wear and tear.	Dirt, vermin and other conditions prejudicial to health.
British ...	61		2	1
Other Nations...	66		1	5

VII.—FOOD INSPECTION.

(1) Action taken under the Public Health (Imported Food) Regulations, 1925, the Public Health (Imported Food) Amendment Regulations, 1933, the Public Health (Imported Milk) Regulations, 1926, and the Public Health (Preservatives, etc., in Food) Regulations, 1925 to 1927 :—

No action was taken, under the above-mentioned Regulations, in the Port of Ipswich, during the year.

(2) Shell-fish. Information respecting any shell-fish beds or layings within the jurisdiction of the P.S.A., stating whether they are in the opinion of the Medical Officer liable to pollution. Report of any action taken under the Public Health (Shell-fish) Regulations, 1915, or the Public Health (Cleansing of Shell-fish) Act, 1932 :—

There are oyster beds or layings within the jurisdiction of the Ipswich P.S.A. No action has been taken during the year under the above-mentioned Regulations and Act.

The oyster beds are not liable to pollution.

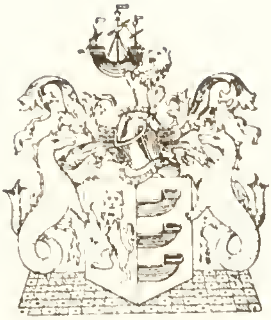
(3) Number of Samples of Food examined by :—

(*a*) Bacteriologist.

(*b*) Analyst.

No samples of food were examined in the Port of Ipswich during the year.

H. L. BATY,
Chief Port Sanitary Inspector.



County Borough of Ipswich.

School Medical Officer's
REPORT

1933.

COUNTY BOROUGH OF IPSWICH
EDUCATION COMMITTEE.

ANNUAL REPORT

FOR 1933,

ON THE MEDICAL INSPECTION OF SCHOOL CHILDREN.

Medical Staff:

A. M. N. PRINGLE, M.B., C.M. (EDIN.), D.P.H. (CAMB.).
Medical Officer of Health and School Medical Officer.

A. W. GAYE, B.A., M.B., B.C., D.P.H. (CAMB.), M.B., CH.B. (MANC.).
Deputy Medical Officer of Health and Assistant School Medical Officer.

MRS. E. M. EDWARDS, M.R.C.S., L.R.C.P. (ENG.).
Assistant School Medical Officer (Part time).

Dental Staff:

T. A. EDMONDSON, L.D.S., R.C.S., Eng.
School Dental Surgeon.

A. W. T. WARD, L.D.S., R.C.S., Eng.
Assistant School Dental Surgeon.

R. CUTHILL, L.D.S., R.C.S., Eng.
Assistant School Dental Surgeon.

Nursing Staff:

MISS M. SANDBACH, MISS F. ILETT, and part-time service of four of the Health Visitors of the Public Health Staff.

County Borough of Ipswich.

PUBLIC HEALTH DEPARTMENT,
ELM STREET,
IPSWICH,

March 31st, 1934.

LADIES AND GENTLEMEN,

I have the honour to present the Report on the Medical Inspection of School Children during the year 1933.

The Report follows on the lines of previous years.

I draw particular attention to the continued success of the Inspection Clinic at Elm Street, and emphasise the vital nature of this branch of the Medical Service.

When the Clinic was established at my office in 1908, it was not realised that the number of children making use of it would be so great as it has now become.

Of recent years the rapid extension of the town in the Nacton and Gainsborough areas has introduced a new difficulty, viz., distance, and the time has come for the Education Committee to give serious consideration to the need for the establishment of a Branch Clinic to serve this area.

For many years the Public Health Committee has run a clinic at the Y.M.C.A. Hut on the Nacton Estate, and it might well be that the Education and Health Committees could join together in the establishment and equipment of an adequate Branch.

It will be realised that this involves much more than a mere building, since it would be requisite to consider the extent of the necessary Medical and Nursing staffs.

From now onwards your Committee are faced with two facts of prime importance:—

(1) The diminution in the annual number of births is reflected in the annual number of entrants into the Schools 5 years later. The meaning of this will be obvious when it is realised that in 1920 there were 2,003 births and 1,728 in 1921. This compares with 1,363 in 1932 and 1,274 in 1933. Making due allowance for immigration, from now onwards, the number of new entrants to the schools will show substantial and sustained diminution.

(2) The movement of the population is definitely from the centre of the town to the outskirts, which, of course, affects the localities in which children are born. In addition to this normal population movement, the effects of considerable population displacement in consequence of slum clearance should not be lost sight of.

In January, 1934, the Board of Education issued new instructions for the preparation of Annual Reports. The necessary changes have been made in preparation for the 1934 Report.

I remain, Ladies and Gentlemen,

Your obedient Servant,

A. M. N. PRINGLE,

Medical Officer of Health,
School Medical Officer.

To the Chairman and Members
of the Education Committee

PUBLIC ELEMENTARY SCHOOLS AND SCHOOL POPULATION.

The following Table gives approximately the number of Public Elementary School Children in Ipswich :—

—	1929	1930	1931	1932	1933
Number of Public Elementary Schools	27	26	26	27	27
Average Number of Children on School Registers	11,408	11,419	11,401	11,617	11,839
Average attendance of Children at School...	10,162	10,190	10,174	10,381	10,763

ROUTINE MEDICAL INSPECTION.

The number of children examined at Routine Medical Inspection since 1929 is shown as follows :—

Group.	1929.	1930.	1931.	1932.	1933.
Entrants	1,155	1,227	887	1,271	1,358
Intermediates ...	1,503	1,406	1,272	1,060	1,190
Leavers	986	926	940	1,211	1,175
Total ...	3,644	3,559	3,099	3,542	3,723

The number of children examined at Routine Medical Inspection during 1933 was the highest since 1928.

The examinations of Leavers will now begin to diminish.

SPECIAL INSPECTIONS.

The appended Table furnishes particulars with reference to the attendance of children at the Inspection Clinic, together with the number of exclusions granted :—

Period.	Numbers of Children attending at Clinic	Total Attendances at Clinic.	Exclusions Granted.	Cases in which no exclusion was necessary	No. of exclusions as result of home visiting by nurses.	Total Exclusions.
Average 1912-15	-	4,568	1,004		—	1,004
1916-20	1,850	6,611	1,525	325	1,180	2,705
1921 25	2,846	10,726	1,930	555	1,590	3,520
1926-30	4,193	13,189	2,520	1,673	2,042	4,562
1926	3.188	12.147	2,168	1,020	1,332	3,500
1927	3,843	13.924	2,485	1,358	1,193	3,678
1928	4,521	13,539	2,580	1,941	2,728	5,308
1929	4,814	13 667	2,858	1,956	2,400	5,258
1930	4,600	12,667	2,509	2,091	2,558	5,067
1931	4,668	12,148	2,239	2,429	1,749	3,988
1932	4,888	14,229	2 299	2,589	1,528	3,827
1933	4 756	13,308	2,035	2,721	1,503	3 538

Although the number of children who attended at the Clinic was not so high as in 1932, it was nevertheless above the average.

There has been a considerable decline in the number of children excluded during the last three years.

It may be expected that the numbers attending the Clinic will now begin to diminish in consequence of the decline in the number of School children, but it will be obvious that this will not curtail either the staff required for the Clinic or the number of sessions upon which it is open.

EXCLUSION OF SCHOOL CHILDREN,

including cases excluded at the School Clinic and by the Health Visitors as a result of home visits.

Disease or Defect.	Cases Excluded.	Total days of exclusion.	Max. days of exclusion.	Min. days of exclusion.	Average No. of days.	Cases Brought over from 1932.
AT SCHOOL CLINIC:—						
Tonsillitis, Diphtheria, Sore Throats, etc. ...	325	4224	85	1	13	15
Debility	161	2593	222	1	16	8
Verminous Conditions ...	158	961	31	1	6	3
External Eye Disorders	123	1971	117	1	16	2
Minor Injuries ...	101	970	48	1	10	—
Impetigo	93	1133	53	2	12	2
Otorrhœa	78	2481	293	1	32	7
Tuberculosis:—						
Other Forms ...	71	3328	288	2	47	12
Pulmonary ...	70	3365	287	4	48	9
Scabies	69	1576	76	5	23	2
Whooping Cough ...	40	1746	108	9	44	2
Influenza	33	431	107	2	13	—
Bronchitis	30	863	122	3	29	1
Anæmia & Heart ...	22	1606	186	11	73	4
Ringworm:—						
Scalp	9	1718	347	17	190	1
Skin	5	66	33	5	13	—
Mumps	1	16	16	16	16	
Other Ailments ...	646	9595	365	1	15	23
TOTAL ...	2035	38643	365 (Max.)	1 (Min.)	19 (Aver'ge)	91
BY HEALTH VISITORS:—						
Measles	408					
Tonsillitis, Coughs, Influenza, etc. ...	332					
Chicken Pox, etc. ...	288					
Whooping Cough ...	272					
Other Infectious Diseases	112					
Impetigo, Sores, etc ...	23					
Minor Injuries ...	5					
Other Ailments ...	63					
TOTAL ...	1503					
GRAND TOTAL ...	3538					

The first three causes for exclusion in this Table are the same as in 1932 and in the same order.

In the case of verminous conditions, though the number of cases remains the same, the school time lost was only half that of the year before.

Minor injuries now take a prominent place in this Table (they were formerly classified under the heading of "Other Ailments"), which consequently show a corresponding decrease. All minor injuries occurring at school attend the Clinic in the first instance.

There was considerably less impetigo, and though ringworm of the scalp shows an increase on the previous year, the numbers remain small.

Scabies was definitely more prevalent in spite of the facilities for treatment.

The following Table compares EXCLUSION FIGURES for 1933 with those of past years. Exclusions as a result of home visits are not included in this Table :—

Year.	Cases Excluded	Total Days of Exclusion	Average No. of Days.
Average.			
1921—25	1.930	68,198	40
1926 30	2.526	63,515	25
1926	2,168	60,207	28
1927	2,485	70,222	28
1928	2,580	63,975	25
1929	2.858	66,550	23
1930	2,509	56,613	22
1931	2,239	42,725	19
1932	2,299	42.401	18
1933	2,035	38,613	19

It will be seen that a smaller number of children were excluded in 1933, a saving of nearly 4,000 school days.

EXCLUSIONS FOR VERMINOUS CONDITIONS AND SCABIES.

The following Table illustrates the experience since 1911 :—

Period.	No. of Cases Excluded.		Average No. of Days Lost	
	Verminous Conditions.	Scabies.	Verminous Conditions.	Scabies.
Average.				
1911—1915	197	19	*	39
1916—1920	*	138	*	35
1921—1925	104	40	6	30
1926—1930	108	18	11	40
1926	141	10	10	24
1927	88	22	9	54
1928	64	13	11	28
1929	121	15	13	63
1930	124	32	10	33
1931	129	35	11	28
1932	158	56	12	25
1933	158	69	6	23

* Figures for these years not available.

308 Baths were given to school children suffering from Scabies at the Disinfecting Station, attached to the Public Health Department, Elm Street, during the year 1933. The existence of this station is a valuable part of the equipment of the Health Services.

These conditions show no improvement in 1933.

Scabies still accounts for a considerable loss of school time.

TREATMENT CLINIC.

The following Table shows the number of children who were treated at the Treatment Clinic during the last few years, together with the total number of visits paid by them :—

Year.	Number of Children Treated.	Total Visits Paid.
Average.		
1921—25	277	2,901
1926—30	715	3,339
1926	377	3,277
1927	665	4,068
1928	866	3,730
1929	835	3,316
1930	834	2,306
1931	912	3,692
1932	854	4,043
1933	845	3,980

The experience of 1933 is very much the same as that of 1932.

This Clinic serves a very useful purpose to some of the poorest members of the community.

The appended Table gives the particular diseases or defects dealt with at the Treatment Clinic :—

Disease or Defect.	1929.	1930.	1931.	1932.	1933.
Ringworm :—					
Scalp	10	8	1		3
Skin	4	3	2	7	8
Scabies	8	34	28	22	46
Impetigo	94	44	111	71	59
Other Skin Diseases ...	171	159	217	216	184
Minor Eye Defects ...	124	110	116	82	107
Minor Ear Defects ...	6	4	13	10	14
Nose and Throat ...	28	25	13	12	13
Minor Injuries ...	216	285	255	285	281
Miscellaneous ...	174	162	156	149	130
Total ...	835	834	912	854	845

Thus Ringworm is now reduced to very small proportions, and Impetigo also shows a considerable diminution.

On the other hand many more cases of Scabies have passed through our hands and the treatment of Minor Injuries has assumed considerable proportions.

MENTALLY DEFECTIVE CHILDREN.

27 children were examined under this heading during 1933, and in addition 6 cases were re-examined.

The results of the examinations were as follows :—

Classified as	Males	Females.	Total.
Feeble Minded M.D. ..	5	7	12
Imbeciles	2	1	3
Idiots	1		1
Total Certified	8	8	16

Of the remainder, 7 were "Dull and Backward," 1 "Backward and Unstable," 2 "Backward," and 1 "Normal."

The following Table compares the figures of 1933 with those of the previous ten years :—

Year.	CLASSIFICATION.														
	Feeble-Minded.			Imbeciles.			Idiots.			Dull and Backward.			Total		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Average 1921-1925	18	11	29	2	4	6	—	—	—	20	12	32	40	27	67
1926-1930	10	10	20	4	3	7	—	—	—	13	14	27	27	27	54
1926	11	8	19	6	5	11	—	—	—	18	22	40	35	35	70
1927	10	17	27	5	2	7	—	—	—	15	15	30	30	34	64
1928	8	6	14	3	1	4	1	—	1	6	12	18	18	19	37
1929	11	13	24	1	6	7	—	—	—	15	6	21	27	25	52
1930	11	6	17	5	2	7	—	1	1	10	13	23	26	22	48
1931	16	20	36	5	1	6	—	—	—	13	6	19	34	27	61
1932	8	6	14	—	1	1	2	1	3	14	5	19	24	13	37
1933	5	7	12	1	2	3	1	—	1	2	5	7	9	14	23

This Table gives the figures of ascertainment, but not a true comparison for the last 2 years, as there were considerably more children on the list for examination than it was possible to examine, partly owing to absence of one of the staff through illness.

BRITANNIA ROAD SPECIAL SCHOOL.

During the year ended December 31st last, 1 boy and 6 girls were discharged and 5 boys and 4 girls admitted.

5 obtained work on leaving, 1 left the town and is attending school elsewhere, and 1 is helping at home.

The School has made good progress and is of higher average standard than formerly.

Of those who left, all were able to read, and only one was not able to write an essay form of letter or composition.

All school subjects are of course continued all through the time spent at this School, but the most valuable part is the manual training given in the later years, viz., woodwork, bootmaking and tailoring for boys; sewing, cooking, laundry for girls, and gardening for all. These subjects are given and treated, not so much from the vocational point, but as a training in application. It is to be regretted that some parents fail to recognise that training in manual subjects is bound to be of great value after school-life, and especially so in the case of children, such as these who require special education and who are found, in most cases, to be more suited for this type of work than anything else.

To those that are interested, it is edifying to see the children at work in this part of the training. It would be of benefit if an Open Day were held when parents and others who should show interest would be welcomed.

During the nine years of its existence 123 children have passed through the School.

The following Table shows what has become of them :—

	Boys.		Girls
In Institutions	16	...	16
Occupation Centre (Basketry)...	8	Sewing ...	5
Unemployed	7	...	5
Married	(1)		3
Died	2	...	—
Decertified	1	...	1
Left the town	1	...	3
Farm Work	6	Domestic Work	12
Crane Bennett's	4	Laundry ...	3
Newspaper Round	2	Factory ...	1
Miscellaneous	20	...	3
Temporary Work	4	...	—
Total	71		52

Of the 71 boys, it will be seen that about 50 per cent. are in definite employment and that the most favoured type is farm work. Of those at work, one is married and one working in a circus. Of those in institutions, several are still of school age.

Of the 52 girls, about 40 per cent. are in employment, and in addition 2 of the 16 at institutions are doing domestic work; 3 are married, 2 having children. The favourite form of work is domestic service, laundry being a poor second.

8 past scholars have held the same work for over 3 years, and 4 for over 4 years.

I should specially like to thank the Head Mistress for help in compiling this report. The main part of the work in collecting the statistics as to the work of past scholars has been entirely due to her efforts.

(Signed) A. W. GAYE,

Deputy Medical Officer of Health and
Assistant School Medical Officer.

PEDICULOSIS AND UNCLEANLY CONDITIONS.

Number of examinations	24,412
Number of individual children found to have nits or vermin ...	460
Number excluded from School	158
Number of "24-hours' Notices" served	39
Number of children cleansed by parents after receipt of "24-hours' Notices"	33
Number of children whose hair was cut or whose heads were cleansed by the Local Authority	6
Number of baths given to children	308
Cases reported to the N.S.P.C.C. for wilful neglect ...	—
Prosecutions	—

The 158 children excluded include those seen at the Clinic and the Nurses' inspections.

The baths given were chiefly for Scabies.

EMPLOYMENT OF SCHOOL CHILDREN.

172 children were examined during 1933, necessitating a total of 199 examinations, under the Employment of Children Act, 1903, as amended by the Education Act of 1921.

	Physical Condition Satisfactory	Passed after re-examination.	Certificate Refused	Application Withdrawn.	Re-examinations carried out.	Total Exams.
Male	149	36	7	3	12	207
Female	1				—	1
Street Traders	3				—	3
TOTAL	153	36	7	3	12	211

The number of examinations under this heading is higher than in the last two or three years.

If the increase continues, it may be regarded as associated with some improvement in trade conditions.

TUBERCULOSIS DISPENSARY.

The session devoted to the examination of school children during 1933 was Friday afternoon.

So far as Institutional Treatment of Tuberculosis is concerned, the following school children were admitted to the Institutions named :—

INSTITUTION	Boys.	Girls.	Total.
Ipswich Sanatorium	24	23	47
East Suffolk & Ipswich Hospital (for treatment of Surgical Tuberculosis)	8	3	11
Ipswich Isolation Hospital—			
(a) Pulmonary Tuberculosis ...		1	1
(b) Surgical Tuberculosis	4	1	5
TOTAL	36	28	64

Ten more children were sent to Institutions in this connection than in 1932.

EYE CLINIC.

The Summary for the year is given below :—

Number of cases examined	468
Number of visits paid	857
Glasses prescribed	227
,, changed	137
,, unchanged	24
No treatment necessary	84
Treatment required (other than the provision of Glasses)	1
Glasses obtained or changed	337

The following defects were found :—

Hypermetropia	57
Hypermetropic Astigmatism	58
Myopia	105
Myopic Astigmatism	21
Mixed Astigmatism	3
Squint	18
All others	8

In connection with the Eye Clinic, the following Table is of interest :

Period.	Number of Children Examined.	Percentage for whom Glasses were prescribed (or changed).	Percentage who obtained (or changed) Glasses.
Average 1921—1925	330	57	81
1926—1930	372	69	95
1926	312	60	95
1927	415	71	96
1928	442	71	92
1929	351	71	98
1930	339	73	96
1931	361	72	96
1932	408	75	98
1933	468	77	93

The number of children examined at the Eye Clinic in 1933 was the highest on record.

A larger number of sessions had to be spent on this work, leaving less time available for other work, such as ascertainment of mental deficiency.

The continued increase in myopia should be noted.

The proportion obtaining glasses still remains satisfactory. This is helped very greatly by the action of the Education Committee in providing or assisting to provide glasses in necessitous cases.

WHITTON OPEN AIR SCHOOL.

During its fourth year of existence, this School has again proved its value in promoting the health of delicate children.

33 boys and 37 girls were discharged, and 40 boys and 30 girls admitted.

Of those discharged, 4 boys and 6 girls were of school leaving age, and all started work in suitable employment. The number of admissions was 7 less than in 1932, but the tendency is to admit as young as possible (2 children of 6 years were admitted), and these younger children require a longer period at the school to recover their normal vigour.

The following Table shows a classification of the ailments of these admissions and discharges. Rather more cases were admitted under the heading of quiescent tuberculosis and subnormal nutrition than in the previous year :—

	Admissions 1933.	Discharges 1933.
Quiescent Tubercular Disease ..	16	19
Pretubercular	11	5
Subnormal nutrition	22	19
Anaemia	3	4
General delicacy	10	14
Other diseases	8	9
TOTAL ..	70	70

Attendance was, on the whole, satisfactory, the girls doing 1 per cent. better in this respect than the boys (82.7). During the influenza epidemic in January the attendance fell at one time to 67.6, but in the hot weather rose to 91.3 per cent. This compares very favourably with the attendance of the average healthy children at the ordinary schools.

An Open Day was held in July, at which the children entertained the parents, who were present in even larger numbers than before. The parents had the opportunity of seeing the school and the children at work, and of discussing them with the staff. Many parents expressed their appreciation of the noticeable improvement in health of their children.

The grounds continue to become more beautiful and more productive, as the result of Mr. Campbell, the Gardening Instructor's efforts. The children enjoy the surroundings, and produce was sent to the other Special School.

November and December were rather dreary months, but were enlivened by the rug and toy making with Christmas in view.

Prizes were distributed by the Deputy-Mayoress (Mrs. G. W. Senton), and an address was given by the Deputy-Mayor.

Thanks for another successful year must be accorded to Miss Jackson and her staff, and in this should be included, not only the teaching staff, but the caretakers, who also take a keen interest in the welfare of the children and school.

(Signed) A. W. GAYE,
Deputy Medical Officer of Health,
Deputy School Medical Officer.

OGILVIE HOME.

Six children (4 boys and 2 girls) were in the Home at the beginning of the year.

The admissions to the Home during 1933 included 4 boys and 1 girl; and 4 boys and 1 girl were discharged.

There were, therefore, 6 children (4 boys and 2 girls) in the Home at the end of the year.

The children sent to this Home continued to reap considerable benefit, though it is not always possible to persuade parents to take advantage of it.

TONSILS AND ADENOIDS.

The following Table gives particulars of the work carried out under this heading during 1933, as compared with the experience of the preceding ten years.

		Average 1921—1925.	Average 1926—1930.	1929.	1930.	1931.	1932.	1933.
No. of Children referred to East Suffolk and Ipswich Hospital ...		173	151	133	148	113	129	121
Percentage who attended Hospital ...		82%	84%	86%	72%	70	77%	53%
Percentage of the cases attending Hospital who received operative treatment ...		81	80%	68%	95%	88	94%	100%
Total attendances (Out-Patients)		262	231	244	188	158	195	115
Operations		102	103	110	109	89	109	68
In-Patient Days	Over 10	33	39	17		5	4	17
	Under 10	69	63	27	25	—	28	80

This Table indicates that a very low percentage of referred children attended the Hospital.

It will also be seen that in-patient treatment is being carried out to the same extent as during the period 1921-1925.

STAMMERERS.

I append Madame Stoton's Report :—

Report for 1933.

Stammerers' Classes.

During the year 1933, twenty-one boys and three girls were included in the four classes which continued to be held at the three centres, London Road, Clifford Road, and St. Helen's. Each class was held for one hour twice a week. The number on the registers at the end of the year was eighteen, which was about the number throughout the year. Attendance was, on the whole, quite good.

Except for two boys from the Central School who have discontinued attendance owing to sufficient improvement in their speech, the mentality of the children in the classes this year has been rather lower than in previous years. Consequently progress has in some cases been slow, but the work of the classes has been by no means disappointing.

Further experience with these special classes has only strengthened my opinion that best results would be obtained if treatment could always be given as early as possible. This means notification to the School Medical Officer of all cases of defective articulation and enunciation. Simple cases of letter substitution, the teacher will find, can be corrected quite easily if the child is quietly shown the right way. The difficulty comes with those children who have no idea of the relation between a letter and its sound and who cannot even imitate a sound or word when they hear it. The speech in such cases is just a jumble of sounds. It is not surprising if in the ordinary school classes such children tend to be left out when questions are being asked. They lose interest and soon become backward. I had one particularly bad case of this type during the year at the London Road Centre. The boy improved so much that it would now be difficult to pick him out from his class as one having defective speech. Another equally bad case has just come into the class and there are prospects of equally good results. Cases of stammering are more readily noticed and so more usually reported. If earlier signs of defective speech were notified small defects could be eliminated before becoming serious habits without directly calling the child's attention to them, and thus many cases of stammering would be prevented.

Although a child may grow out of a minor speech defect by exercising its own powers of observation and imitation, the result can usually be obtained more quickly with some special training and unobtrusive advice. With this in mind, I have continued to ask parents of new pupils to come to see me. In almost every case they have done so and appeared willing to co-operate with me.

(Signed) ISMAY STOTON.

PHYSICAL TRAINING.

I have pleasure in appending the Report of Mr. W. Tye, the Organiser of Physical Training:—

The purpose of this particular Annual Report is to give a resumé of the development of physical training in the Borough Schools since 1928.

The time seems opportune to make some comment on the co-operation of the physical training of the Borough and East Suffolk schools, which has been in vogue for five years. Generally the scheme appears sound, economical and effective. The Organisers have met with no difficulites whatever in moving from one Authority to the other, for which they are grateful to the two Committees. This freedom of movement has enabled the Organisers to adapt their work to weather and other conditions, thus giving help and advice where most needed. The total time, viz., three days each week spent by the Organisers in the Borough schools seems sufficient. Under the present arrangements the teachers have time to assimilate advice, and to put the suggestions to a practical test between the visits. Another advantage arising out of the co-operation of the physical training of the Borough and the County is that it is now possible for the teachers generally to make closer acquaintance through the medium of the teachers' training classes. This closer contact has brought about, in effect, further developments in inter-school activities. The occasional use of the Borough schools and playing fields by the County teachers is much appreciated.

Training of Teachers.—The training of teachers has been one of the brightest features of the Organisers' work. Since 1928, 287 teachers have attended classes in physical exercises and games. This is undoubtedly an excellent response and is an indication of much enthusiasm on the part of the teachers. One of the chief benefits arising out of these courses of instruction is that it has brought about a closer acquaintance between Organisers and Teachers, thereby gaining a first-hand knowledge of the actual difficulties and general circumstances of the various schools. In consequence of this training, the teachers generally are interested in physical training in its widest sense, and have obtained some amount of knowledge of its practical teaching and underlying theories.

Accommodation.—Since 1928 the Committee have given every attention to the provision of inside accommodation for physical exercises when building new schools. The three new junior schools at Greenwich, Priory Heath, and Gainsborough have excellent halls. Also the Smart Street Junior School, since structural alterations were made, has exceptionally good inside accommodation. It is in the Central Schools, however, where the greatest improvement is seen. They are most fortunate in having properly equipped gymnasia, which, as soon as the teachers can take advantage of further training, will prove a definite boon. It is so necessary that the children here should utilise existing facilities for correcting physical defects that are so common during the period of rapid growth. Practically all the schools have good playgrounds: these are a distinct advantage for exercise, when taken in the open air.

Playing Fields.—Very rapid strides have been made in the provision of playing fields during recent years. Since 1928 three new playing fields have been opened and are now in very pleasing condition. The groundsmen, under the capable supervision of Mr. Ager, have prepared, in a comparatively short time, numerous playing pitches for varied winter and summer games. These fields are in use by fifteen schools, who are obviously obtaining real benefit from play under such delightful conditions. A small part of the Greenwich playing field has recently been prepared for games for the Greenwich Junior School. The older children here are now having systematic periods of organised games. There is undoubtedly a very keen appreciation of the Committee's provision of playing fields by both teachers and scholars. This is clearly indicated by systematic attendance during the week, and particularly by those numerous matches and competitions arranged each Saturday morning. On a recent tour of the fields on such a morning, it was noticed that there were thirty football and netball teams actually at play. In this way the children are developing a love of games in the open air, which in later life will encourage them to play rather than to watch others.

Swimming.—Adequate provision is made for the increasing number of children who are desirous of learning to swim. During this last season 930 boys and 718 girls applied for instruction. It was unfortunate that, owing to a leakage in the Fore Street Bath, the girls could not continue their attendance. The boys had a most successful season, 502 obtaining learners' certificates. This is an increase of 100 per cent. on the results of 1928. Children travelling the longer distances are provided with 'bus vouchers by the Committee. In consequence such children are less fatigued and receive more benefit from their instruction. The offering of fifty scholarships by the Ipswich Swimming Club to the Borough elementary schools is a very fine gesture, and is much appreciated by all concerned. This will provide an excellent opportunity for those fortunate boys and girls to improve their swimming, and the arrangement will incidentally bring them in contact with a favourable environment.

Elementary Schools Sports' Association.—This Association has done some very useful work during recent years in the interests of the schools. Leagues in football, cricket and netball have been organised by the teachers. Inter-school competitions are carried on throughout the year after school hours; these matches are supervised by the teachers, who are keen and give unsparingly of their time. In addition to this, the teachers organise athletic sports annually and a swimming gala. The latter was held at St. Matthew's Baths this last autumn, and was a great success. In addition to the usual swimming races, a demonstration in life-saving was organised, which was helpful to both teachers and scholars.

New Syllabus.—The new syllabus of physical training (1933) has been circulated in the schools, and seems to have been very well received by the teachers, who seem anxious to apply it as fully as possible in the near future. As the syllabus strikes a definitely new line, both in types of exercises and in method of teaching, arrangements have been made for the teachers to have further opportunities for training.

Conclusion.—In conclusion it is clear that since 1928 much ground has been gained, viz.,

(1) All the new schools have good accommodation for physical training.

(2) The majority of the schools have access to the Committee's playing fields.

(3) Nearly all the teachers have received training in the teaching of the activities, and are anxious to go further ahead.

(4) Swimming results have vastly improved.

(5) Most of the head teachers have developed a wider appreciation of the educational value of a sound physical training scheme.

(Signed) W. TYE,
Organiser of Physical Training.

HIGHER EDUCATION.

IPSWICH SCHOOL.

Six visits were paid to this School for Routine Medical Inspection during 1933.

Term	Boys Examined.	No. of Defects Found.	No. of Re-Examinations.
Spring	12	12	38
Summer	61	49	20
Autumn	55	39	37
TOTAL	128	100	95

The defects found are as under :—

For Treatment.	
Dental	22
Vision	2
Deformities	2
	26

For Observation.	
Deformities	37
Enlarged Tonsils ...	10
Enlarged Cervical Glands	7
Other Conditions (Nose and Throat) ...	4
Vision	2
Other Defects (Eyes) ...	2
Otitis Media ...	2
Defective Speech ...	2
Squint	1
Other Defects (Ear) ...	1
Organic Heart Disease	1
Suspected Tuberculosis	1
Other Defects ...	4
	74

Three times as many new boys were examined as in 1932.

The water of the School Bath was examined and found to show gross bacterial pollution. Appropriate steps have been taken to provide a plant which will place the water in the School Bath in the same high degree of purity as that in the St. Matthew's Bath.

NORTHGATE SCHOOL FOR BOYS.

Routine Medical Inspection, "Following up" and "Sports" examinations occasioned 7 visits to this School during 1933.

Term	Boys Examined.	No. of Defects Found	No. of Re-Examinations.
Spring	42	15	93*
Summer	182	54	20
Autumn	51	27	42
TOTAL	275	96	155

* Includes 62 boys seen as to fitness for sports

The defects observed are shown as under :—

For Treatment.

Vision	15
Other Deformities ...	4
Dental	3
Malnutrition	2
Spinal Curvature ...	1
Other Defects ...	1
	26

For Observation.

Skin (Non-T.B.) ...	15
Enlarged Tonsils ...	10
Enlarged Glands ...	10
Other Defects (Nose and Throat)	5
Malnutrition ...	4
Vision	4
Other Defects (Eyes) ...	4
Heart Disease (Functional)	3
Nervous System ...	3
Other Defects (Ears) ...	2
Lungs (Non-T.B.) ...	2
Uncleanliness (Body) ...	1
Squint	1
Otitis Media ...	1
Suspected Tuberculosis	1
Tuberculous Glands ...	1
Deformities	1
Other Defects ...	2
	70

There was a decrease in the number of defects found. Not so many boys were found suffering from malnutrition, and the impression remains that conditions are much better in this respect than they were some five or more years ago.

NORTHGATE SCHOOL FOR GIRLS.

Five visits were paid to this School during the year.

Term.	Girls Examined.	No. of Defects Found.	No. of Re-Examinations.
Spring	54	23	6
Summer	51	16	4
Autumn	31	15	62
Total	136	54	72

The defects observed are shown as under :—

For Treatment.		For Observation.	
Vision	12	Vision	7
Deformities	4	Heart Disease (Functional)	6
Adenoids	1	Enlarged Tonsils ...	5
Other Defects ...	1	Lungs (Non-T.B.) ...	5
		Deformities	3
		Other Defects (Ears) ...	2
		Nervous System ...	2
		Other Conditions (Eyes)	1
		Enlarged Glands ...	1
		Heart Disease (Organic)	1
		Other Defects ...	3
	18		36

It will be noted that there were no girls discovered suffering from sub-normal nutrition, and a considerably smaller percentage of defects was found.

Examination of the water in the Bath at Northgate School showed a high degree of bacterial pollution.

It is hoped that by the time the bathing season comes on this year, a chlorinating, aerating, alkalinising and circulating plant will have been installed, on the same lines as the highly efficient plant recently provided at the St. Matthew's Baths.

REPORT ON THE WORK OF THE SCHOOL DENTAL DEPARTMENT FOR THE YEAR 1933.

ROUTINE WORK.

During the year 25 Elementary and the Northgate Schools were visited, the number of Departments being 42, viz. : Infants 11, Girls 9, Boys 11, Mixed 4, and Junior 7.

The teeth of 10,579 children were examined, 8,699 re-inspections and 1,880 first inspections. The following Table gives details of ages :

TABLE A.

Year of Inspection.	Ages of Children—Routine.											Total.		
	5	6	7	8	9	10	11	12	13	14	15	Routine.	Non-Routine.	Total Inspected
Average 1921-1930	838.2	896.2	874.1	839.3	877.7	824.7	709.8	700.8	669.4	238.7	128.5	6341.9	381.1	6643.2
1931	891	1010	1081	1075	1167	1249	1101	846	752	340	125	9637	—	9637
1932	905	988	1040	1075	1099	1079	1193	1228	854	338	310	10109		10109
1933	922	946	1058	1087	1073	1141	1116	1309	1302	376	249	10579	—	10579

Of the total number inspected only 1,602, or 15.14 per cent. had every tooth perfectly sound, whilst 3,292 or 31.11 per cent. had mouths containing 8,547 septic teeth, an average of 2.59 each, as witness the following Table :—

TABLE B.

Year.	Percentage of Children having septic teeth.	Average number of septic teeth per child.	Percentage having "All-sound" teeth
Average 1921-1930	48.63	2.87	10.35*
1931	37.54	2.78	13.32
1932	30.76	2.74	14.83
1933	31.11	2.59	15.14

*Average of 4 years only.

Of the total number inspected only 4,718 or 44.59 per cent. had all the permanent teeth present in the mouth perfectly sound, whilst 4,407 or 41.65 per cent. had decayed permanent teeth which were savable.

The following comparative Table gives the necessary details :—

TABLE C.

Year.	Number of Permanent Teeth Decayed Savable												Total No. of children with decayed permanent teeth savable.	Total No. of Decayed Perm. teeth savable.	Percentage of children examined.
	1	2	3	4	5	6	7	8	9	10	11 and 12	Over 12			
Average 1921 1930	946.3	1067.2	405.1	294.6	34	15.2	6.3	3		—			2587.3	5302.8	39.04
1931	1,441	1,450	714	643	103	44	15	11	7	1			4,429	10,100	45.95
1932	1,620	1,447	694	453	101	49	20	8	2	3	1	-	4,398	9,471	43.50
1933	1,638	1,460	698	443	93	39	22	10	2	2		-	4,407	9,395	41.65

7,757 permanent teeth filled in previous years were found artificially sound.

Table D. gives details regarding children selected for treatment.

TABLE D.

Year.	Children Inspected.	Selected for Treatment.	Percentage Selected.	Extractions only.	Fillings only.	Fillings and Extractions	Dressings only.
Average 1921 1930	6341.9	4376.8	70.14	44.63	26.55	28.54	0.14
1931	9,637	6,761	70.15	36.34	37.80	25.57	0.29
1932	10,109	6,487	64.17	33.08	11.68	24.89	0.35
1933	10,579	6,856	64.80	35.45	39.86	23.03	1.66

During the year 6,856 letters were sent to parents inviting consents to treatment; of these 6,317 letters were returned, 55.8 per cent. consents and 44.2 per cent. refusals.

The following Table indicates the variation in the percentage of "consents to treatment."

TABLE E.

Year.	Selected for Treatment.	Percentage of consents.
1920	1,772	63.00
Average 1921-1930	4376.8	58.60
1931	6,761	60.2
1932	6,487	56.09
1933	6,856	55.8

It is regrettable that in spite of all our propaganda efforts the percentage of " consents " remained low. The " refusals " are mostly for the filling of teeth.

The apathy of most people towards the question of the filling of decayed teeth is amazing, and the deliberate neglect of many parents in regard to the preservation of their children's permanent teeth is little short of criminal. There appear to be three reasons for this :—

First : Ignorance, which we try to combat by means of special letters and leaflets worded in plain language. The following is a reproduction of part of our " filling " letter :—

> " Dear Sir (Madam),
>
> The School Dental Surgeon has examined the mouth of your child .... and has discovered that *certain of the permanent teeth have cavities of decay.*
>
> In order to prevent the decay spreading deeper into these teeth and in time completely ruining them it is necessary to have them filled. Good fillings will make them last a great many years.
>
> A chart of your child's mouth is kept at the Dental Clinic, and the School Dentist will be pleased to point out which teeth require to be filled.
>
> ---
>
> It is not generally known that the EIGHT TEMPORARY MOLARS are not replaced by PERMANENT TEETH until the ages of ten and eleven years; also that the FOUR FIRST PERMANENT MOLARS cut the gums at the back of the mouth, behind the last temporary teeth, when the child is between 5½ and 6 years of age.
>
> It is very important for your child's health that the treatment should be undertaken as soon as possible."

But it is apparent that some people do not take the slightest interest in the matter.

Second : The child's fear of being hurt and the pandering of the parent to this fear.

Third : The ease and painlessness with which aching teeth may be promptly extracted.

In reply to our letter the parent often writes "No, not filled, will have it out when it aches."

Table F. gives the number of children treated, together with the extractions and fillings :—

TABLE F.

Year	Children Treated	Teeth Extracted.			Number of Fillings.		
		Temporary	Permanent.	Total.	In Temp. Teeth.	In Perm. Teeth.	Total.
Average 1921-1930	3323.7	5802.1	494.2	6296.3	365.1	2477.4	2842.5
1931	4,811	7,809	1,117	8,926	27	5,686	5,713
1932	4,458	5,925	1,230	7,155	105	4,552	4,657
1933	4,269	6,034	1,161	7,195	262	4,579	4,841

SUMMARY OF WORK IN 1933.

Routine Dental Inspection and treatment now includes children of all ages in the Elementary Schools, the Non-Routine group having entirely disappeared.

The following are tabulated details of work done during the year :—

Number of schools visited	27
,, ,, visits to schools	123
,, ,, departments visited	42
,, ,, half-days devoted to inspection and talks to parents	131
,, ,, mouths examined at dental inspection ...	10,579
,, ,, children selected for treatment	6,856
,, ,, letters sent	6,794
Actual number of children treated	4,269

Number of attendances made	6,186
,, ,, appointments made	6,508
,, ,, appointments broken	1,308
,, ,, amalgam stoppings in permanent teeth	2,774
,, ,, amalgam and cement stoppings in permanent teeth	1,323
,, ,, cement stoppings in permanent teeth	457
,, ,, root canal treatments	25
,, ,, amalgam stoppings in temporary teeth	29
,, ,, cement stoppings in temporary teeth	233
Total number of stoppings	4,841
Number of permanent teeth stopped	4,044
,, ,, temporary teeth extracted	6,034
,, ,, permanent teeth extracted	1,161
,, ,, local anæsthetic cases	511
,, ,, nitrous oxide administrations	2,782
,, ,, sundry dressings in temporary teeth	146
,, ,, sundry dressings in permanent teeth	2,186
,, ,, children for whom advice was sought	422
,, ,, children brought to clinic who then refused treatment	26
,, ,, children treated who had been treated in former years	2,463
,, ,, talks to parents at schools	16
,, ,, employment cases treated	31
,, ,, artificial crowns fitted	1
,, ,, gold inlays	1
,, ,, regulation plates fitted	—
,, ,, dentures fitted	3
,, ,, porcelain tips fitted	—

The Radiologist at the East Suffolk Hospital kindly took on our behalf four X-Ray photographs of children's mouths.

During the year £116 9s. 1d. was received in payment for treatment from 4,019 children, an average of 6¾d. each.

THOMAS A. EDMONDSON,
School Dental Surgeon.

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31st DECEMBER, 1933.

Defect or Disease.		ROUTINE INSPECTIONS.		SPECIAL INSPECTIONS.	
		No. of Defects.		No. of Defects.	
		Requiring Treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring Treatment.	Requiring to be kept under observation, but not requiring treatment.
(1)		(2)	(3)	(4)	(5)
	Malnutrition	77	60	32	—
Skin	Ringworm—Scalp ...	—	1	11	—
	Body ...	—	—	11	1
	Scabies	3	1	58	—
	Impetigo	1	—	205	—
	Other Diseases (Non-Tuberculous)	5	19	450	18
Eye	Blepharitis	2	6	42	—
	Conjunctivitis	—	—	77	1
	Keratitis	—	1	10	—
	Corneal Opacities ...	—	2	3	—
	Defective Vision (excluding Squint)	150	125	82	12
	Squint	10	13	14	1
	Other Conditions ...	1	11	129	12
Ear	Defective Hearing ...	6	17	6	3
	Otitis Media	3	2	37	—
	Other Ear Diseases ...	3	20	72	16
Nose and Throat	Chronic Tonsillitis only (Enlarged Tonsils) ...	4	394	34	91
	Adenoids only	3	26	9	6
	Chronic Tonsillitis and Adenoids (Tonsils and Adenoids)	79	22	40	—
	Other Conditions ...	7	20	293	16
Enlarged Cervical Glands (Non-Tuberculous)		1	213	136	17
Defective Speech		5	10	6	1
Heart and Circulation	Heart Disease—Organic ...	—	4	6	1
	Functional	—	143	1	5
	Anæmia	1	5	16	—
Lungs	Bronchitis	7	11	47	3
	Other Non-Tuberculous Diseases	7	146	1	1
Tuberculosis	Pulmonary—Definite ...	1	1	8	—
	Suspected ...	7	61	14	18
	Non-Pulmonary—				
	Glands	—	2	12	1
	Bones and Joints ...	—	—	—	—
	Skin	—	—	2	—
	Other Forms	—	3	1	—
Nervous System	Epilepsy	—	—	1	4
	Chorea	—	—	8	3
	Other Conditions ...	1	29	7	5
Deformities	Rickets	—	—	—	—
	Spinal Curvature ...	—	1	2	—
	Other Forms	7	22	7	9
Other Defects and Diseases (excluding Uncleanliness and Dental Diseases)		41	130	1003	16

B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group.	Number of Children		Percentage of children found to require treatment.
	Inspected	Found to require treatment.	
(1)	(2)	(3)	(4)
Prescribed Groups—			
Entrants	1358	162	11.9
Second Age Group ...	1190	149	12.5
Third Age Group ...	1175	105	8.9
Total (Prescribed Groups) ...	3723	416	11.2
Other Routine Inspections	207	7	3.4

MEDICAL INSPECTION RETURNS.

Year ended 31st December, 1933.

TABLE I.

RETURN OF MEDICAL INSPECTIONS.

A.—ROUTINE MEDICAL INSPECTIONS.

Number of Inspections in prescribed Groups :—

Entrants	1,358
Second Age Group	1,190
Third Age Group	1,175
Total	3,723

Number of other Routine Inspections ...	207

B.—OTHER INSPECTIONS.

Number of Special Inspections	7,430
Number of Re-Inspections .. .	6,904
Total	14,334

Table II. faces this page.

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

CHILDREN SUFFERING FROM MULTIPLE DEFECTS 12.

BLIND CHILDREN.

At Certified Schools for the Blind	At Public Elementary Schools.	At other Institutions	At no School or Institution.	Total
1	—		1	2

PARTIALLY BLIND CHILDREN.

At Certified Schools for the Blind	At Certified Schools for the Partially Blind	At Public Elementary Schools.	At other Institutions	At no School or Institution	Total
		13		3	16

DEAF CHILDREN.

At Certified Schools for the Deaf	At Public Elementary Schools	At other Institutions.	At no School or Institution.	Total
8			2	10

PARTIALLY DEAF CHILDREN

At Certified Schools for the Deaf	At Certified Schools for the Partially Deaf	At Public Elementary Schools	At other Institutions	At no School or Institution	Total.
		5		2	7

TABLE III.—Continued.

MENTALLY DEFECTIVE CHILDREN.

FEEBLE-MINDED CHILDREN.

At Certified Schools for Mentally Defective Children.	At Public Elementary Schools.	At other Institutions	At no School or Institution	Total
78	2	10	1	91

EPILEPTIC CHILDREN.

CHILDREN SUFFERING FROM SEVERE EPILEPSY.

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
1	2			3

PHYSICALLY DEFECTIVE CHILDREN.

A. TUBERCULOUS CHILDREN.

1.—CHILDREN SUFFERING FROM PULMONARY TUBERCULOSIS.

(Including pleura and intra-thoracic glands.)

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total.
		22	6	28

2. CHILDREN SUFFERING FROM NON-PULMONARY TUBERCULOSIS.

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
4	16	4		24

TABLE III.—Continued.

B. DELICATE CHILDREN.

At Certified Special Schools.	At Public Elementary Schools	At other Institutions.	At no School or Institution.	Total
104	288	7	10	409

C. CRIPPLED CHILDREN.

At Certified Special Schools	At Public Elementary Schools.	At other Institutions	At no School or Institution.	Total
6	29		2	37

D. CHILDREN WITH HEART DISEASE.

At Certified Special Schools	At Public Elementary Schools	At other Institutions	At no School or Institution	Total
4	8		2	14

TABLE IV.

RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31st DECEMBER, 1933.

TREATMENT TABLE.

Group I.—Minor Ailments (excluding Uncleanliness, for which see Group V.).

Disease or Defect. (1)	Number of Defects Treated, or Under Treatment During the Year Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
Skin			
Ringworm, scalp (Treated by X-Ray shown in parenthesis)	3 (2)	8	11 (2)
Ringworm, body	8	3	11
Scabies	46	15	61
Impetigo	59	147	206
Other skin disease	184	271	455
Minor Eye Defects (External and other, but excluding cases falling in Group II) ..	107	157	264
Minor Ear Defects	14	61	75
Miscellaneous (e.g. minor injuries, bruises, sores, chilblains, etc.)	424	710	1,134
Total	845	1,372	2,217

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.).

Defect or Disease (1)	Number of Defects dealt with. Under the Authority's Scheme. (2)	Submitted to refraction by private practitioner or at Hospital apart from the Authority's Scheme. (3)	Otherwise. (4)	Total (5)
Errors of Refraction (including Squint) (Operations for Squint should be recorded separately in the body of the Report) ...	468	1	—	469
Other Defect or Disease of the Eyes (excluding those recorded in Group I).			—	—
TOTAL ...	468	1		469

Number of children for whom spectacles were prescribed:
(i) Under the Authority's Scheme 364
(ii) Otherwise ... ... —

Number of children for whom spectacles were obtained:
(i) Under the Authority's Scheme 337
(ii) Otherwise ... ... —

Group III.—Treatment of Defects of Nose and Throat.

NUMBER OF DEFECTS. Received Operative Treatment: Under the Authority's Scheme, in Clinic or Hospital. (1)				By Private Practitioner or Hospital, apart from the Authority's Scheme. (2)				Total. (3)				Received other forms of Treatment (4)	Total number Treated. (5)
(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)		
	1	67	—	—			—		1	67		101	169

(1) Tonsils only (2) Adenoids only. (3) Tonsils and Adenoids
(4) Other defects of the nose and throat.

Group IV.—Orthopaedic and Postural Defects.

	Under the Authority's Scheme. (1)			Otherwise (2)			
	Residential treatment with education. (1)	Residential treatment without education (2)	Non-residential treatment at an orthopaedic clinic. (3)	Residential treatment with education. (1)	Residential treatment without education. (2)	Non-residential treatment at an orthopaedic clinic (3)	Total number treated
Number of children treated	3	(Full details not available this year.)					

Group V.—Dental Defects.

1.—Number of Children who were :—

(i) Inspected by the Dentist :—

	Aged.		
Routine Age Groups	5	922	Total 9,780
	6	946	
	7	1,058	
	8	1,087	
	9	1,073	
	10	1,116	
	11	1,016	
	12	1,146	
	13	1,127	
	14	289	
Specials			1,597
Grand Total			11,377

(ii) Found to require treatment	7,710
(iii) Actually treated	3,791

2.—Half-days devoted to :—

Inspection	119	
Treatment	1,211	Total 1,330

3.—Attendances made by children for treatment		5,268
4.—Fillings : Permanent teeth	3,409	
Temporary teeth	262	Total 3,671
5.—Extractions : Permanent teeth	1,054	
Temporary teeth	5,961	Total 7,015
6.—Administrations of general anæsthetics for extractions		2,701

7.—Other operations :—

Permanent teeth	1,097	
Temporary teeth	146	Total 1,243

Group VI.—Uncleanliness and Verminous Conditions.

1.—Average number of visits per school made during the year by the School Nurses	3.3
2.—Total number of examinations of children in the Schools by School Nurses	24,412
3.—Number of individual children found unclean	132
4.—Number of children cleansed under arrangements made by the Local Education Authority	6
5.—Number of cases in which legal proceedings were taken :—	
(a) Under the Education Act, 1921	nil.
(b) Under School Attendance Byelaws	nil.

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School Medical Officer.